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## INFECTIOUS HEPATITIS: A REVIEW OF 200 CASES


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and

LIEUTENANT COMMANDER ROBERT E. SHANK (MC), U.S.N.R.

New York


There have been few wars during the past century in which infectious hepatitis, or "epidemic jaundice," as it is frequently called, has not been responsible for a significant portion of the total noncombatant illness. With the possible exception of the War for Independence, jaundice has appeared in every campaign in which the armed forces of the United States have participated.[1] During the present war epidemic hepatitis has been a grave military problem, and although the total number of cases among all the military forces of the world will be revealed only at some later date, there is sufficient evidence from published reports to indicate that it is one of the most important noncombatant illnesses among troops of all branches of military service.[2] Outbreaks of jaundice are, moreover, not limited to members of the fighting forces. It has been commonly encountered in sporadic and endemic form in civilian communities for many decades. Camps, boarding schools, orphanages and other eleemosynary institutions have been particularly favorable sites for outbreaks of infectious hepatitis. In several instances the disease has reached epidemic proportions in the community surrounding the institution where the initial cases occurred. During the winter of 1921-1922 the state of New York was visited over a very wide area by so-called infectious jaundice, with one report alone recording over 700 cases.[3]

### MATERIAL

The present report is concerned with a partial analysis of the results of clinical and metabolic studies and of the effects of various forms of treatment on 200 patients with infectious hepatitis admitted to the Rockefeller Institute Hospital between July 3, 1944 and April 1, 1945. Except for 2 civilians, the patients were commissioned officers and enlisted personnel from the Second, Third, Fourth and Fifth Naval Districts. Data on age and sex distribution in these cases are shown in table 1. The purpose of the study was threefold: (1) to define, as far as biochemical and metabolic technics for the evaluation of hepatic function permit, the extent to which the liver is damaged in the average nonfatal case of infectious hepatitis; (2) to ascertain to what extent the damage is repaired, and the length of time required for complete or maximal recovery of hepatic function, and (3) to assess the effect of various therapeutic measures, currently held to be of value in hastening regeneration following damage to the liver, on the length of time required for recovery of normal hepatic function.

### CLINICAL MANIFESTATIONS OF INFECTIOUS HEPATITIS

Qualitatively, the clinical features of the patients with infectious hepatitis described in this study have been remarkably constant, with, however, differences in the severity of symptoms, ranging all the way from slight malaise in some to a state of toxemia in exceptional cases not unlike that seen in acute yellow atrophy. In approximately 85 per cent of patients a prodromal period lasting from one to nine days has preceded the appearance of jaundice; in a few it has been ten to fifteen days and in rare cases twenty to twenty-five days (table 2). Approximately 10 per cent of the patients complained of jaundice as the initial symptom. A number of patients, approximately 5 per cent, claimed that they did not have subjective symptoms either in the preicteric phase of the disease or thereafter. In these cases medical help had been sought because of the development of icterus. In most patients, however, a well defined preicteric stage was characterized by lassitude and fatigue, nausea and almost complete anorexia. An initial elevation of temperature, between 100 and 103 F., has occurred in approximately one half of the cases. In most instances the appearance of jaundice coincided with the end of the initial symptoms and the beginning of convalescence.

The degree of icterus varied greatly, from a local condition limited principally to the periphery of the scleras to one of intense, generalized yellow-bronze pigmentation involving the scleras, the whole skin and the mucous membranes. Undoubtedly a few of the cases with only slight icterus would have escaped clinical detection had it not been for associated signs of liver disease, including anorexia, nausea and hepatomegaly with tenderness. Although nausea was common, vomiting was infrequent. Headache was a presenting sign in approximately one third of the cases (table 3).


From the Hospital of the Rockefeller Institute for Medical Research. The authors are members of the U. S. Navy Research Unit at the Hospital of the Rockefeller Institute for Medical Research.


This article has been released for publication by the Division of Publications of the Bureau of Medicine and Surgery of the U. S. Navy. The opinions and views set forth in this article are those of the writers and are not to be considered as reflecting the policies of the Navy Department.


The following naval officers, members of the U. S. Navy Research Unit at the Hospital of the Rockefeller Institute for Medical Research, rendered valuable assistance in the clinical care of patients and in the performance of certain laboratory procedures described in this study: Lieut. O. F. Binkley, H (S), U.S.N.R.; Lieut. Comdr. E. C. Curnen, MC (S), U.S.N.R.; Lieut Comdr. V. P. Dole, MC (S), U.S.N.R.; Lieut. Comdr. K. Emerson Jr., MC (S), U.S.N.R.; Lieut. (j. g.) T. L. Hartman (MC), U.S.N.R.; Lieut. Comdr. G. S. Mirick, MC (S), U.S. N.R., and Lieut. Comdr. J. E. Ziegler Jr. MC (S), U.S.N.R.


1. Blumer, G.: Infectious Jaundice in the United States, J. A. M. A. **81**: 353 (Aug. 4) 1923.
2. Stowman, K.: The Epidemic Outlook in Europe, J. A. M. A. **128**: 185 (May 19) 1945. Office of Surgeon General, Circular Letter No. 95: The Outbreak of Jaundice in the Army, J. A. M. A. **120**: 51 (Sept. 5) 1942.
3. Williams, H.: Epidemic Jaundice in New York State, 1921-1922, J. A. M. A. **80**: 532 (Feb. 24) 1923.

Abdominal discomfort, amounting to frank pain in the exceptional case, was common. Frequently there were complaints of epigastric pain and only rarely of pain in the upper right quadrant. Liver enlargement was present on admission in 51 per cent of the patients, with hepatic tenderness in 38 per cent (table 4). Most

TABLE 1.—*Age and Sex Distribution in 200 Cases of Infectious Hepatitis*

| Age in Years | Sex | | Number of Cases | Per Cent of Cases |
|---|---|---|---|---|
| | Male | Female | | |
| 16 - 20 | 59 | 0 | 59 | 29.5 |
| 21 - 25 | 70 | 4 | 74 | 37.0 |
| 26 - 30 | 27 | 2 | 29 | 14.5 |
| 31 - 35 | 23 | 1 | 24 | 12.0 |
| 36 - 40 | 12 | 0 | 12 | 6.0 |
| 41 - 45 | 1 | 0 | 1 | 0.5 |
| 46 - 50 | 1 | 0 | 1 | 0.5 |
| Total | 193 | 7 | 200 | 100.0 |

patients presented some degree of hepatic tenderness and hepatomegaly at some time during the course of the disease. Enlargement of the spleen occurred in 10 per cent of the cases. Bradycardia of variable degree was present at some stage of the disease in many of the patients showing moderate to severe icterus. Pruritus of all degrees of severity occurred in 46 per cent of cases. The appearance of bile in the urine was observed by the patient in nearly every instance within a period of one to three days before the appearance of jaundice in the scleras. Less frequently the patient had also noted light or clay colored stools during this period.

Frank recrudescence of the disease, a state recognized by deterioration of the patient's condition during recovery and leading to a return of clinical symptoms, was recognized in 6 cases. In a larger number of cases, however, amounting to approximately 15 per cent of the group, there were periods when liver function tests revealed values which were more abnormal than those previously observed. These periods may have represented adverse phases of the disease which were not sufficiently well defined to be reflected in a return of clinical symptoms. A history of previous episodes of acute infectious hepatitis was given by 5 patients, among whom 1 recalled three separate attacks during the preceding ten years. A history of recent contact with other cases of infectious hepatitis was given frequently.

### DIFFERENTIAL DIAGNOSIS

In most cases the differential diagnosis of infectious hepatitis presented little or no difficulty. The sudden onset of a train of symptoms, largely referable to the liver and digestive tract, in a group of young men previously in excellent health, resulted in a clinical picture hard to confuse with other diseases. This was especially true in patients from regions in which the incidence of hepatitis had been relatively high, with the result that the physicians in these areas were sensitized to its occurrence. Nevertheless erroneous tentative diagnoses were common, and in some cases the referring diagnosis had to be changed entirely, owing to the appearance of new clinical phenomena during the course of the patient's illness. The most common mistakes in diagnosis were made in the preicteric phase of the disease and consisted in confusion of hepatitis with upper respiratory infections, atypical pneumonia and infectious mononucleosis. Weil's disease, amebic hepatitis, malarial hepatitis, hemolytic jaundice and obstructive lesions of the biliary tract were occasionally ventured as alternative diagnoses in a few cases after the appearance of jaundice. The relatively high incidence of hepatitis in endemic areas from which the patients were chiefly supplied, the relative infrequency of obstructive lesions of the biliary tract in men of military age and the fact that the patients came from a group of individuals previously selected for military service on the basis of freedom from chronic ill health and physical disability combined to offer favorable circumstances for correct clinical diagnosis.

### TESTS OF HEPATIC FUNCTION

It is generally accepted that no single test of hepatic function has been devised which gives an adequate index of the physiologic condition of the liver. Little consideration, however, has been given to a study of the kind and minimal number of hepatic function tests which should be performed in order to give maximal information necessary for the intelligent clinical care of patients with various types of hepatic insufficiency.

Data on weekly determinations of several tests of metabolism and liver function, covering the clinical stages of hepatitis from acute onset to the end of convalescence, were obtained in each of the cases reported in this series. Determinations on the plasma included albumin, globulin, fibrinogen, prothrombin time, alkaline phosphatase, free and esterified cholesterol, phospholipid, total lipid, vitamin A, sulfobromophthalein retention and bilirubin. Weekly cephalin flocculation tests were made on the serums. A complete analysis of data secured from multiple serial tests of liver function in infectious hepatitis will appear in a subsequent report.

Except in the infrequent case presenting signs of chronic liver disease, all abnormal values for the various constituents of the blood in patients with infectious hepatitis returned to normal within the period of time covered by hospitalization. The average rate at which values for an individual test of liver function returned to normal appeared to bear a very definite relation to the rate at which values for other tests fell within the normal range. Notwithstanding the fact that the tests were chosen in a manner calculated to cover the greatest possible diversity of function, there was a surprising correlation in the degrees of alteration shown by the results of the various tests at any time during the course of the

TABLE 2.—*Interval Between Onset of Symptoms and Appearance of Jaundice in 200 Cases of Infectious Hepatitis*

| Interval in Days | Number of Cases | Per Cent of Cases |
|---|---|---|
| 0 - 4 | 80 | 40.0 |
| 5 - 9 | 92 | 46.0 |
| 10 - 14 | 18 | 9.0 |
| 15 - 19 | 5 | 2.5 |
| 20 - 24 | 4 | 2.0 |
| 25 - 29 | 0 | 0.0 |
| 30 - 34 | 1 | 0.5 |
| | 200 | 100.0 |

disease in any given case. There was likewise a remarkably close agreement in general between the results of any given series of tests and the clinical impression gained by a study of the patient at the time the tests were performed. Data on the correlation of the results of the various tests of liver function with respect to one another and with the clinical course of the disease have been compiled in table 5. Multiple tests of liver function appeared to have their greatest usefulness in

the late stages of convalescence when it was no longer certain from the clinical condition of the patient whether the activity of the disease process had subsided. At this stage in the disease the greatest degree of dissociation among the results of the various tests of liver function was encountered. In approximately 10 per

TABLE 3.—*Symptoms Occurring in the Preicteric Phase in 200 Patients with Infectious Hepatitis*

| Symptoms | Number of Cases | Per Cent of Cases |
|---|---|---|
| General symptoms | | |
| Lassitude and fatigue | 137 | 68.5 |
| Pruritus | 93 | 46.5 |
| Fever | 83 | 41.5 |
| Headache | 53 | 26.5 |
| Chills | 34 | 17.0 |
| Upper respiratory infection | 31 | 15.5 |
| Muscle and joint pains | 24 | 12.0 |
| Syncope | 16 | 8.0 |
| Epistaxis | 9 | 4.5 |
| Cough | 8 | 4.0 |
| Urticaria | 6 | 3.0 |
| Symptoms referable to disease of the liver or gastrointestinal tract | | |
| Anorexia | 184 | 92.0 |
| Urine dark | 181 | 90.5 |
| Nausea | 158 | 79.0 |
| Vomiting | 117 | 58.5 |
| Abdominal pain | 114 | 57.0 |
| Acholic stools | 109 | 54.5 |
| Constipation | 45 | 22.5 |
| Diarrhea | 19 | 9.5 |
| No preicteric symptoms | 15 | 7.5 |

cent of the cases clinical convalescence appeared to be complete two to three weeks, and sometimes longer, before the results of certain liver function tests (notably the retention of sulfobromophthalein and the ratio of free to total cholesterol) had fallen within the accepted range of normal.

Deviation from the normal values for percentage retention of sulfobromophthalein paralleled in general the deviation from the normal of simultaneous values obtained for plasma bilirubin. When clinical jaundice was evident, the use of both tests gave little information which would not have been revealed by either alone. However, in the incipient stages of the disease, and in the late stage of convalescence, when the bilirubin concentration in the plasma was normal or nearly so, the sulfobromophthalein retention proved to be much more sensitive than the test for bilirubin. It was particularly helpful in indicating the presence of latent hepatic insufficiency. Since clinical signs of the disease were often minimal or absent in this phase of the disease, it is evident that a considerable number of patients would have been discharged before they had regained complete recovery of liver function had the sulfobromophthalein tests not been performed and a normal value required before the patient was permitted to return to active duty.

The level of vitamin A in the plasma was in the low range of normal or diminished in every case, and in general this diminution was proportional to the clinical severity of the disease. The vitamin A content of the plasma began to rise early in convalescence and was always well within the normal range by the time convalescence was established. Several factors are probably at work in the production of lowered values for vitamin A in the plasma during the acute stages of infectious hepatitis: (1) lowered intake and faulty absorption of the vitamin, due respectively to anorexia and to deviation of the bile salts from the intestinal tract; (2) decreased storage capacity of the diseased liver for vitamin A, with consequent dependence of the height of the plasma level on the amount and rate of ingestion of the vitamin. Moreover, it is likely that in febrile diseases in which the plasma vitamin A is low, as in rheumatic fever and pneumonia, there occurs a more rapid rate of utilization or destruction of the vitamin than in the normal subject.[4]

The plasma prothrombin time was increased only in those cases of infectious hepatitis presenting severe symptoms and evidence of extensive destruction of the hepatic parenchyma as revealed by other tests of liver function. In most patients having an increased prothrombin time, the parenteral administration of menadione resulted in prompt return of the values to the normal range.

The total protein, albumin and globulin of plasma were determined at weekly intervals on 150 patients with acute infectious hepatitis. The acute phase of the disease was found in some patients to be accompanied by a decrease in the total protein, an increase in globulin and a decrease in the albumin fraction. During convalescence these changes were reversed, and on clinical recovery the ratio of albumin/globulin was well within the normal range. Twenty-one per cent of the 150 patients had levels of plasma protein less than 6 Gm. per hundred cubic centimeters at some time during the acute phase of the disease. At this time the concentration of plasma albumin was less than 4 Gm. per hundred cubic centimeters in 44 per cent of the patients, while plasma globulin greater than 3 Gm. per hundred cubic centimeters was observed in 16 per cent. In 40 per cent of patients acutely ill of hepatitis, the albumin/globulin ratio was less than 1.5.

Total lipid and phospholipid concentrations of the plasma were determined at weekly intervals during the entire course of the disease in more than 100 patients in order to learn to what extent aberrant fat metabolism, believed to occur in this disease, was reflected in altered plasma lipid concentration. During the acute stages no important changes were manifest. Within a few days after the onset of jaundice, however, elevation in the lipid and phospholipid concentrations of the plasma was found, occasionally reaching 200 per cent of the normal concentration of lipid and 300 per cent concentration of phospholipid; and usually this elevation persisted until the onset of convalescence,

TABLE 4.—*Common Physical Findings in 200 Patients with Infectious Hepatitis*

| | Number of Cases | Per Cent of Cases |
|---|---|---|
| Hepatomegaly | 102 | 51.0 |
| Hepatic tenderness | 76 | 38.0 |
| Splenomegaly | 27 | 13.5 |
| Hypotension (systolic pressure less than 110 mm. of mercury) | 38 | 19.0 |
| Bradycardia (heart rate less than 60 per minute) | 50 | 25.0 |
| Acneform skin lesions | 11 | 5.5 |
| Furunculosis | 3 | 1.5 |

when there was a rapid restoration of the concentration of the lipids to normal levels.

Comparative values for the common tests of liver function employed in this study in a typical case of infectious hepatitis, of average duration and severity, are depicted in the accompanying chart.

4. Shank, R. E.; Coburn, A. F.; Moore, L. V., and Hoagland, C. L.: The Level of Vitamin A and Carotene in the Plasma of Rheumatic Subjects, J. Clin. Investigation **23**: 289 (May) 1944.

### CHANGES IN THE CELLULAR ELEMENTS OF THE BLOOD

The erythrocyte count in the majority of patients was maintained at a normal level throughout the course of the disease. A hyperchromic anemia of moderate degree, however, was encountered in those patients presenting unusually severe symptoms of hepatitis and in cases showing chronic damage to the liver persisting over periods of several months or more. The leukocyte count varied from 4,000 to 10,000 initially in the disease process. In some cases there was a moderate leukopenia early in the course of the disease. However, normal values for the leukocytes were recorded in all cases in the period of beginning convalescence. Lymphocytosis to an extent of 45 to 70 per cent of the total leukocyte count was noted frequently early in the disease. In most cases the erythrocyte sedimentation rate was normal or only slightly elevated during the first several days of the disease. It frequently increased to values of 25 to 50 mm. per hour during the period of convalescence, however, and gradually fell to normal limits late in the period of recovery.

TABLE 5.—*A Comparison of the Results of Selected Serial Tests of Liver Function in Patients with Infectious Hepatitis*

| Tests of Liver Function | Normal Range of Tests | References | Total Number of Patients Tested | Number of Patients Showing Abnormal Values | Average Maximum Result in Tests During Illness | Average Time Required for Results of Tests to Fall in Normal Range, Days |
|---|---|---|---|---|---|---|
| Albumin/globulin ratio..... | 2.3-3.3 Gm. | Reiner, M.: Manual of Clinical Chemistry, Interscience Publishers, Inc., New York, 1941 | 159 | 149 | 1.6 | 52.2 |
| Total protein..... | 6.5-8.0 Gm. per 100 cc. | Reiner, M.: Manual of Clinical Chemistry, Interscience Publishers, Inc., New York, 1941 | 159 | 92 | 6.24 Gm. per 100 cc. | 40.5 |
| Alkaline phosphatase..... | 1.5-8 (King-Armstrong units) | Binkley, F.; Shank, R. E., and Hoagland, C. L.: Modification of the King-Armstrong Method for Determination of Phosphatase, J. Biol. Chem. **156**: 253 (Nov.) 1944 | 120 | 49 | 11.4 units | 36.9 |
| Bilirubin..... | 0.2-0.5 mg. per 100 cc. | Van den Bergh, A. A. H.: La récherche de la bilirubine dans le plasma sanguin par la méthode de la réaction diazoique, Presse méd. **29**: 441 (June 4) 1921. Malloy, H. T., and Evelyn, K. A.: The Determination of Bilirubin with the Photoelectric Colorimeter, J. Biol. Chem. **119**: 481 (July) 1937 | 163 | 157 | 6.7 mg. per 100 cc. | 73.0 |
| Sulfobromophthalein retention | 0.0-5 mg. per 100 cc., 45 min. | Rosenthal, S. M., and White, E. C.: Clinical Application of the Bromsulfalein Test for Hepatic Function, J. A. M. A. **84**: 1112 (April 11) 1925. Hoagland, C. L., and Shank, R. E.: Unpublished data | 163 | 142 | 32.1 mg. per 100 cc. | 54.4 |
| Cephalin flocculation..... | 0-+ | Hanger, F. M.: The Flocculation of Cephalin-cholesteral Emulsions by Pathological Sera, Tr. A. Am. Physicians, **53**: 148, 1938. Hanger, F. M., and Patek, A. J.: The Cephalin Flocculation Test in Cirrhosis of the Liver, Am. J. M. Sc. **202**: 48 (July) 1941 | 125 | 115 | +++ | 49.5 |
| Cholesterol ratio, free/total | 0.20-0.30 | Schoenheimer, R., and Sperry, W. M.: A Micromethod for the Determination of Free and Combined Cholesterol, J. Biol. Chem. **106**: 745 (Sept.) 1934 | 163 | 140 | 0.53 | 70.0 |
| Erythrocyte sedimentation rate | 2-15 mm./hr. | Hoagland, C. L., and Shank, R. E.: Unpublished data | 163 | 98 | 29.8 | 55.0 |
| Phospholipid..... | 130-330 mg. per 100 cc. | Kuttner, T., and Lichtenstein, L.: Microcolorimetric Studies. III. Estimation of Organically Bound Phosphorus, A system of analysis of phosphorus compounds in blood, J. Biol. Chem. **95**: 661 (March) 1932 | 100 | 26 | 499 mg. per 100 cc. | 37.2 |
| Total lipid..... | 570-820 mg. per 100 cc. | Bloor, W. R.: The Determination of Small Amounts of Lipid in Blood Plasma, J. Biol. Chem. **77**: 53 (April) 1928 | 99 | 52 | 940 mg. per 100 cc. | 42.1 |
| Vitamin A..... | 30-40 microgm. per 100 cc. | Murrill, W. A.; Horton, P. B.; Lieberman, E., and Newburgh, L. H.: Vitamin A and Carotene. II. Vitamin A and Carotene Metabolism in Diabetics and Normals, J. Clin. Investigation **20**: 395 (July) 1941 | 119 | 93 | 26.6 microgm. per 100 cc. | 41.6 |

### THE CARDIOVASCULAR AND AUTONOMIC NERVOUS SYSTEMS IN INFECTIOUS HEPATITIS

Bradycardia of some degree occurred in 25 per cent of the patients with infectious hepatitis and in general was confined to those cases manifesting moderate to severe clinical symptoms of the disease. In some cases it persisted throughout the period of convalescence. Search was made in each case of infectious hepatitis for other symptoms referable to the autonomic nervous system. Hypotension, with systolic pressures below 110 mm. of mercury, was of frequent occurrence. Sinus irregularity of the heart occurred frequently, both with and without bradycardia. In these cases electrocardiographic tracings frequently revealed changes in the site of origin of the atrioventricular impulse. Partial heart block, as revealed by lengthening of the PR interval, occurred occasionally in a few patients. In these cases abolition of the partial block could be achieved by the parenteral administration of atropine. The effect of atropine was temporary, however, and in some patients little or no effect was observed. Symptoms which could be definitely attributed to pylorospasm were elicited in only 2 cases. Intestinal hyperperistalsis as such was not recognized, but in most of the severe cases repeated reference was made to vague abdominal pain during acute and convalescent stages alike.

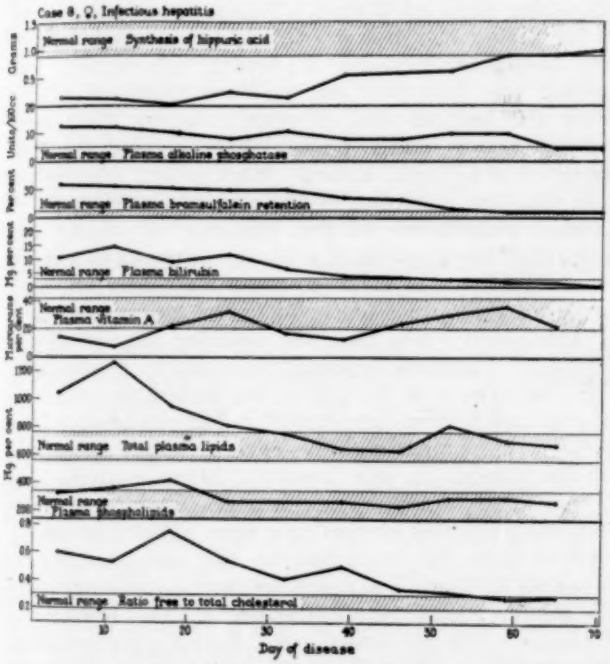
The fact that bradycardia and in some instances prolongation of the PR interval could be abolished by atropine favors the hypothesis that vagal stimulation due to some unexplained process was at work in the production of the cardiovascular phenomenon.[5] Against this hypothesis, however, is the fact that in several cases no detectable changes in the delayed PR interval

5. Hewlett, A. W.: Pathological Physiology of Internal Diseases, revised edition, New York, D. Appleton & Co., 1928.

occurred following atropine in spite of the fact that sufficient drug was given to produce a moderate tachycardia. Moreover, by reference to table 6 it will be observed that no relationship could be demonstrated between the heart rate and the length of the PR interval. If the prolongation of the PR interval was due solely to vagotonia, an accompanying bradycardia would have been expected.

### SPECIFIC THERAPY IN INFECTIOUS HEPATITIS

Except in the occasional case in which the syndrome becomes chronic, infectious hepatitis is apparently a self-limited disease.[6] Until more specific information is at hand concerning the metabolic aberrations in this disease, it seemed wise to limit attempts at therapy to those measures which are believed on the basis of animal experimentation to hasten repair of the damaged liver. In the present series the following types of therapy have been tried; namely, the administration of


Case 8, Q, Infectious hepatitis
Normal range Synthesis of hippuric acid
Normal range Plasma alkaline phosphatase
Normal range Plasma bromsulfalein retention
Normal range Plasma bilirubin
Normal range Plasma vitamin A
Normal range Total plasma lipids
Normal range Plasma phospholipids
Normal range Ratio free to total cholesterol
Day of disease

Comparative values for the common tests of liver function employed in this study in a typical case of infectious hepatitis of average duration and severity.

methionine, choline and crude liver extract to three groups of selected patients respectively. A fourth group, to which isotonic solution of sodium chloride was given, constituted a control series. All four groups were maintained on diets containing on the average 150 Gm. of protein, 60 Gm. of fat and 400 Gm. of carbohydrate throughout the period of observation.

The rationale for the administration of methionine in the treatment of patients with liver disease is derived from results obtained in the prevention of chloroform injury to the liver in protein depleted dogs.[7] Claims have been made both for [8] and against [9] its efficacy in the treatment of infectious hepatitis. Only patients admitted early in the course of the disease were selected for trial with methionine. Other groups, strictly comparable with respect to time of onset of the disease before institution of therapy, were selected for treatment

TABLE 6.—*Table Showing Lack of Correlation Between Heart Rate and Increase in PR Interval in Infectious Hepatitis*

| Heart Rate | Total Number of Determinations | Number of Determinations with PR Interval 0.20 or Over | Per Cent |
|---|---|---|---|
| 40 - 50 | 3 | 1 | .. |
| 50 - 60 | 16 | 3 | 19 |
| 60 - 70 | 68 | 15 | 22 |
| 70 - 80 | 82 | 19 | 23 |
| 80 - 90 | 83 | 13 | 16 |
| 90 -100 | 47 | 11 | 23 |
| 100 -110 | 13 | 0 | .. |

with saline solution, liver extract and choline. Strict rotation of patients among the four groups was observed throughout.

Sixteen patients comprise the group treated with methionine. Each patient received 5 Gm. of a racemic mixture of the amino acid in 200 cc. of isotonic solution of sodium chloride intravenously on admission and daily thereafter for ten days. The material was well tolerated and induced no adverse signs or symptoms. Although the group was fairly small, it appeared from objective clinical considerations, including a study of the average net change in weight, and from results of frequent tests of liver function, that the course of the disease was not perceptibly influenced by this form of treatment. Since the patients who received methionine were at the same time receiving diets moderately high in protein, the results do not permit a statement regarding the possible effectiveness of supplementary methionine in the presence of an inadequate protein intake (table 7).

The use of choline in the treatment of acute hepatic insufficiency is based on a rationale somewhat similar to that proposed for methionine. Both compounds are lipotropic,[10] and in the normal animal methionine may be considered nutritionally equivalent to choline.[11] In view of the widely essential role of the liver in intermediary metabolism, it is not justified to assume in our present incomplete state of knowledge of liver processes that methionine is nutritionally equivalent to choline in hepatic insufficiency. It was deemed important, therefore, to give choline a separate trial in the treat-

TABLE 7.—*Comparison Respectively Between Effects of Methionine, Choline, Liver Extract and Saline Solution on the Average Period Required for Recovery in Patients with Infectious Hepatitis*

| Medication | Number of Patients | Net Change in Weight in Hospital, Kg. | Average Duration of Illness, Days |
|---|---|---|---|
| Intravenous methionine | 16 | +2.9 | 53.5 |
| Oral choline | 29 | +3.1 | 50.7 |
| Intravenous crude liver extract | 34 | +3.5 | 48.9 |
| Intravenous saline solution (control group) | 31 | +3.1 | 51.5 |

6. Lucké, B.: The Structure of the Liver After Recovery from Epidemic Hepatitis, Am. J. Path. **20:** 595 (May) 1944.

7. Miller, L. L.; Ross, J. F., and Whipple, G. H.: Methionine and Cystine, Specific Protein Factors Preventing Chloroform Liver Injury in Protein Depleted Dogs, Am. J. M. Sc. **200:** 739 (Dec.) 1940.

8. Beattie, J., and Marshall, J.: Methionine in the Treatment of Liver Damage, Nature **153:** 525 (April 29) 1944.

9. Peters, R. A.; Thompson, R. H. S.; King, A. J.; Williams, D. I., and Nicol, C. S.: Sulphur-Containing Amino Acids and Jaundice, Nature **153:** 773 (June 24) 1944. Methionine in Infective Hepatitis, Military Intelligence Division, W. D. G. S., Military Attaché Report, Great Britain, July 18, 1944.

10. Best, C. H., and Lucas, C. C.: Choline Chemistry and Significance as a Dietary Factor, in Vitamins and Hormones, New York, Academic Press **1:** 1-58, 1943.

11. duVigneaud, V.; Cohn, M.; Chandler, J. P.; Schenck, J. R., and Simmonds, S.: The Utilization of the Methyl Group of Methionine in the Biological Synthesis of Choline and Creatine, J. Biol. Chem. **140:** 625 (Aug.) 1941.

ment of infectious hepatitis in order to learn whether the syndrome would be favorably modified thereby.

Twenty-five patients comprise the group which received choline. Each patient received 5 Gm. of choline hydrochloride in divided doses on admission and daily thereafter for ten days. The material was well tolerated in each case. However, no effect was noted on the clinical course of the disease which could be attributed to choline therapy. An average duration of illness of 50.7 days for the group of patients treated with choline was not significantly different from that of 53.5 for methionine or 51.5 days for the control group receiving only saline solution. The average gain in weight during convalescence for the patients in this group was approximately the same as in the control group.

The rationale for the administration of crude liver extract to patients with infectious hepatitis is harder to assess. Its use in the treatment of this disease was prompted by promising results which we have obtained during the past three years following its administration intravenously in large amounts to patients with cirrhosis of the liver.[12] Thirty-four patients with infectious hepatitis were treated daily with a specially prepared aqueous extract of Cohn's fraction G of liver[13] in amounts of 10 cc., diluted to 50 cc. with saline solution

TABLE 8.—*Effect of a Regimen of Rest on the Duration of Convalescence in Infectious Hepatitis*

| Interval Between Appearance of First Symptoms and Hospitalization, Days | Number of Patients in Group | Average Period in Hospital, Days | Average Duration of Illness, Days | Standard Error |
|---|---|---|---|---|
| 1-14 | 108 | 37.1 | 46.3 | 1.9 |
| 15-29 | 62 | 30.8 | 51.1 | 1.9 |
| 30 and more | 19 | 31.8 | 80.8 | 9.0 |

and given intravenously over a period of ten days following admission of the patient to the hospital. Careful preliminary tests for sensitivity and toxicity were carried out in every case before the full dose of 10 cc. was given. The material was well tolerated, and no adverse effects were observed in any patient. The difference between an average period of 48.9 days for the patients receiving liver extract and 51.5 days for the alternate control group receiving only saline solution was not considered significant. No significant difference in average gain in weight was recorded for this group over the control group or over the groups treated with choline and methionine.

In none of the foregoing groups is the number of patients particularly large. It should be kept in mind, however, that the groups were made up of men of nearly the same age, presenting approximately the same degree of severity of the disease, and all in nearly the same stage of hepatitis when therapy was begun. The patients, moreover, had been in excellent health prior to the onset of the disease and were entirely free from complications of any sort other than hepatitis. Smaller numbers in each group were required, therefore, to yield significant data than would have been the case had there been differentials in age and sex and variability in the previous states of health of the patients.

12. Hoagland, C. L., in Conferences on Therapy: The Modern Treatment of Cirrhosis of the Liver and Hepatic Insufficiency, New York State J. Med. **43**: 1041 (June) 1943. Ralli, Elaine P.; Robson, J. S.; Clarke, Delphine, and Hoagland, C. L.: Factors Influencing Ascites in Patients with Cirrhosis of the Liver, J. Clin. Investigation **24**: 316 (May) 1945. Hoagland, C. L.: The Therapy of Liver Diseases, Bull. New York Acad. Med. **21**: 537 (Oct.) 1945.

13. Jacobson, B. M., and Subbarow, Y.: Studies of the Principles in Liver Effective in Pernicious Anemia: VI. Recent Advances in the Purification of Active Substances, J. A. M. A. **116**: 367 (Feb. 1) 1941.

### EFFECT OF HOSPITALIZATION AND REST ON LENGTH OF TIME REQUIRED FOR CONVALESCENCE IN INFECTIOUS HEPATITIS

In an effort to ascertain those factors in the clinical care of patients with infectious hepatitis which affect the duration of convalescence, study was made of the effect of hospitalization and rest and of activity on the clinical course of the disease. Whenever possible, patients were transferred promptly from outlying naval districts to the Rockefeller Hospital on the appearance of the first unequivocal signs of hepatitis. Here a rigid routine of bed rest and restricted activity was imposed until convalescence was well under way. Some activity was permitted when the clinical condition of the patients appeared to warrant it and was increased gradually until it was deemed safe to permit the patient to be up and about the ward ad libitum. When all objective signs of the disease had disappeared and there was no longer any laboratory evidence of hepatic dysfunction, the patient was permitted one to three hours of liberty from the hospital each afternoon, having first been warned against undue physical exertion and the consumption of food and alcohol. Each patient was further told that any infraction of these rules would result in prompt cancellation of the privilege of liberty and jeopardize the granting of a routine of ten days' experimental period of sick leave on convalescence. In most instances these rules of conduct were respected.

Although it is now generally conceded that the clinical course of infectious hepatitis is favorably modified by strict adherence on the part of the patient to a regimen of rest and relative inactivity,[14] it had not always been possible to enforce such restrictions before admission of the patient to our service. Many patients had become ill at sea under circumstances in which adequate hospitalization and clinical care were difficult or impossible to carry out; some patients had been sent to port hospitals for study and diagnosis, with consequent delay of several weeks before transfer to the Rockefeller Hospital could be carried out. In yet another group the diagnosis was sufficiently equivocal in the early stages of illness to result in a prolonged period of observation, with delay in transfer. It became of interest, therefore, to ascertain what the overall effect of these circumstances might have been on the duration of convalescence and the severity of the attack in the average case of infectious hepatitis. The following groups were recognized: 1. Patients admitted to the Rockefeller Hospital within a period of fourteen days following the onset of the first unequivocal symptoms of infectious hepatitis. 2. Patients admitted within a period of fourteen to twenty-eight days following the onset of symptoms. 3. Patients who for the reasons stated were not admitted to our service until thirty or more days after the onset of the first symptoms of hepatitis. No cases of chronic liver disease or of hepatitis with complications were included in any of the three groups. Since all cases of infectious hepatitis recognized as such were sent through a blanket order from outlying naval districts to the Rockefeller Hospital, it has been assumed that the factors contributing

14. Barker, M. H.; Capps, R. B., and Allen, F. W.: Acute Infectious Hepatitis in the Mediterranean Theater, Including Acute Hepatitis Without Jaundice, J. A. M. A. **128**: 997 (Aug. 4) 1945.

to delay in transfer of the patients to the hospital were chiefly those which have been outlined, namely delay in reaching port, difficulties in diagnosis, and so on. A few patients had been promptly and effectively hospitalized in the interval between the appearance of the first symptoms of the disease and transfer of the patient to this hospital. Most patients, however, had been permitted activity as desired as soon as the acute stages of the disease had passed.

Graphic presentation of the effect of prompt and delayed institution of a regimen of rest and relative inactivity on the duration of convalescence in infectious hepatitis is shown in table 8. A consideration of the standard error indicates a questionable difference between 46.3 days for the average duration of illness in group 1 and an average duration of 51.1 days in group 2. The difference, therefore, may or may not be significant. There is no doubt, however, of the significance of the difference in the periods of convalescence between groups 1 and 2 and of group 3, with an average duration of 80.8 days. Since the essential difference among the various groups with respect to this analysis resided solely in the number of days antedating the period of restriction of physical activity imposed at the Rockefeller Hospital, it would appear that a regimen of hospitalization and restriction of activity imposed as late as thirty days following the onset of hepatitis had appreciably shortened the period of convalescence.

### RECRUDESCENCE OF INFECTIOUS HEPATITIS FOLLOWING A PERIOD OF SICK LEAVE

While recrudescence amounting to definite deterioration of the patient's clinical condition during the course of convalescence was fortunately rare, evidence obtained from a careful analysis of 200 cases during recovery from hepatitis indicates that a large number of the patients showed some evidence of a temporary recrudescence following a period of apparent clinical recovery. Of various tests of liver function which were repeated serially on these patients, the sulfobromophthalein retention test proved most helpful in enabling us to detect evidence of recurrent hepatitis in patients in whom there was apparent complete convalescence and who as a consequence were granted a test period of ten days' leave from the hospital. Evaluation of the hepatic status of each patient was carried out immediately on the patient's return, including tests of sulfobromophthalein retention, plasma bilirubin and cephalin flocculation. Of the total group 18.5 per cent showed an abnormal elevation in the sulfobromophthalein retention during the convalescent period after sulfobromophthalein retention and the bilirubin concentration had reached normal or approximately normal levels. Of these, 82 per cent showed this reversal directly following the onset of a ten day period of sick leave. All cases showed an eventual return of the sulfobromophthalein retention to the normal range. In nearly all cases additional evidence was found of hepatic dysfunction, consisting of enlargement of the liver, with tenderness in some, complaints of fatigue in others and in certain cases of anorexia and abdominal pain. In several patients the cephlin flocculation test was positive. In a few there was a measurable elevation of the bilirubin. The total period of convalescence for this group was considerably lengthened over the group in which there were no evidences of hepatic dysfunction following return from sick leave. The average additional period of time required for convalescence in the group showing recrudescence varied from three days to ten weeks, with an average period of twenty days.

The percentage of patients who may be expected to develop signs of chronic liver disease following convalescence from an acute attack of hepatitis is not known with certainty at the present time. The incidence has been said to be low.[6] However, objective criteria for residual damage were not met in many instances or patients followed for long enough periods of time to have warranted the judgment that they had fully recovered. Establishment of adequate criteria which will permit early recognition of residual damage to the liver following an attack of infectious hepatitis is one of the major problems waiting to tax the ingenuity of the postwar worker in the field of liver disease.

### SUMMARY

Qualitatively the clinical features observed in 200 cases of infectious hepatitis were remarkably constant, consisting of an acute febrile prodromal period with an average of 6.2 days' duration before the onset of clinical icterus. Quantitatively, however, there were differences in the severity of symptoms ranging all the way from slight malaise in some patients to a state of toxemia in exceptional cases not unlike that seen in acute yellow atrophy.

In most cases the differential diagnosis presented little difficulty, particularly after the onset of icterus. In the preicteric stage of the disease, however, it was frequently confused with upper respiratory infections, atypical pneumonia and infectious mononucleosis.

Multiple tests of liver function were performed at weekly intervals on each patient. Of these the plasma bilirubin, the ratio of free to total cholesterol in the plasma and the plasma retention of sulfobromophthalein were the most useful and least subject to equivocation in interpretation. On the whole there was remarkably close agreement between the results of any given series of tests and the clinical impression gained by a study of the patient at the time the tests were performed. Multiple tests of liver function appeared to have their greatest usefulness in the late stages of recovery from hepatitis when it was no longer possible to ascertain clinically whether convalescence was complete. At this stage of the disease the greatest degree of dissociation among the results of the various tests was observed.

In three groups of patients receiving supplements of methionine, choline and crude liver extract, respectively, and a diet high in protein and carbohydrate and moderately low in fat, no evidence of an accelerated recovery was obtained over that of a control series receiving the diet alone.

Prompt hospitalization and relative freedom from activity appeared to be of paramount importance in speeding recovery from hepatitis.

While recrudescence amounting to well defined deterioration of the patient's clinical condition following beginning convalescence was rare, 18.5 per cent showed a mild to moderate recrudescence following a period of apparent clinical recovery. In 82 per cent of these cases the recrudescence occurred following a period of activity occasioned by a grant of liberty or temporary discharge from the hospital. All patients in this group showed an eventual relief of clinical symptoms and normal tests of hepatic function after an average period of twenty days' additional hospitalization.

# MORPHOLOGIC CHANGES IN RED BLOOD CELL WITH IRON DEFICIENCY ANEMIA

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and
VLADIMIR C. FLOWERS, M.D.
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One of the most signal forward steps in the field of hematology is a recognition of the fact that the term "secondary anemia" must give way to a descriptive diagnosis which implies the etiologic component. Next to infection, iron deficiency is probably the most common cause of anemia. It is our purpose to point out certain characteristics of the blood as determined from the analysis of 628 cases of iron deficiency, in each of which bleeding, either alone or in combination with other factors, was responsible for the anemia. We have become particularly impressed with the progressive changes which take place in the red cells as the iron deficient state becomes more and more definite, and the correlation of these changes with the severity of iron deficiency and the degree of anemia. Another point of practical importance which became apparent as the study progressed was the independent rate of fall of hemoglobin and red cells, with the more important of these factors, the hemoglobin, receiving too little attention.

## MATERIAL

The material in this report was based on a study of adult patients entering the Cook County Hospital. In each case known or occult bleeding was present, often complicated by inadequate intake of iron-containing foods. In no instance was dietary inadequacy alone responsible for the anemia. The sources of bleeding were the nose, esophageal varices, peptic ulcers, carcinoma of the stomach, cecum, rectum, bladder and uterus, uterine fibroids and other causes of menorrhagia and metrorrhagia, isolated cases of thrombocytopenic purpura and Osler's disease, and combinations of these factors. Deficient iron intake was due in many instances to ill advised ulcer regimens or the abstinence from meats because of real or purported hypertension. No case was included in the series in which the iron deficiency was unexplained or complicating factors, such as infections or metastases, were prominent. No peculiarities of pattern were demonstrable for the different sex, race or age groups.

## METHODS

Red cell counts were done in the usual manner. Hemoglobin determinations were made with a photoelectric colorimeter so standardized that 15.6 Gm. equaled 100 per cent hemoglobin. The color index was obtained by dividing the percentage of hemoglobin by the percentage of red cells. Blood smears were prepared by a modification of the cover slip technic and stained with Wright's stain. Red cell abnormalities in the smears were correlated with the red cell count, hemoglobin and color index. All figures were subjected to statistical analysis for standard variation from the normal by the formula $\delta = \sqrt{\frac{\Sigma d^2}{n-1}}$. No values were found subject to elimination. The T value $\left(\frac{m_1 - m_2}{\sqrt{\frac{\delta_1^2}{n_1} + \frac{\delta_2^2}{n_2}}}\right)$ was in all instances in excess of 5.

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Read by title at the 18th annual meeting of the Central Society for Clinical Research, Nov. 2, 1945.
Though this report deals exclusively with adults, our experience has shown no difference for children or infants.
From the Hematological Laboratory and the Hektoen Institute for Medical Research of the Cook County Hospital.

## COMMENT

Lemery and Geoffy (1713) were the first to demonstrate iron in blood ash, and Menghini (1746) is credited with the discovery that this iron can be increased by increasing the feeding of iron-containing foods. Sydenham (1681) introduced iron into clinical medicine for the treatment of anemia, while Blaud (1831) emphasized the specific action of iron in chlorosis and recognized that iron preparations restored the coloring matter to the blood. Reduction of iron in the blood of chlorotics was first reported in 1832 by Födisch, while Andral (1842) showed that iron therapy caused an increase in the red cell count in this disease.[1]

The characteristics of the red cells which accompany iron deficiency are so well known as to require only enumeration. These are microcytosis, hypochromia, poikilocytosis, low mean corpuscular volume, low mean corpuscular hemoglobin and low mean corpuscular hemoglobin saturation. The low color index, which is the single most valuable "index" when based on accurate red cell counts and hemoglobin determinations, has also been well popularized. The clinical significance of these changes have been dealt with more recently by Castle and Minot,[2] Heath and Patek,[3] Price-Jones[4] and Wintrobe,[5] while Parsons[6] has demonstrated the experimental corollary in the rat.

Notwithstanding the extensive clinical and experimental literature on the subject, nowhere has the correlation between the development of the anemia, the fall of the hemoglobin and the exhaustion of the iron stores been discussed.

Our awareness that a rather precise correlation existed between the length and severity of the bleeding, the consequent exhaustion of the stored iron of the body, and especially the reduction of hemoglobin, diminishing color index and the ultimate fall in red blood cells, came as a result of observing large numbers of patients with chronic bleeding. It has also become apparent that no significant fall in any of these (red cell count, hemoglobin or color index) will accompany chronic bleeding as long as the iron stores remain intact.

Once the stored iron is exhausted, the negative iron balance first manifests itself in a diminution of hemoglobin and a concomitant fall in color index, since the red cell level remains unchanged. From here on the hemoglobin fall is almost linear, with the red cell fall constantly lagging behind and resulting in an ever decreasing color index. This divergence continues until the color index reaches about 0.5, at a hemoglobin level of 25 per cent (3.9 Gm.) and a red cell level of 2.5 million. Since this represents the lowest limit of the color index (Reimann's[7] "rule of the minimal color index")[8] any further fall in hemoglobin will be followed by a parallel fall in the red cell count.

1. Goodman, L., and Gilman, A.: The Pharmacological Basis of Therapeutics, ed. 1, New York, Macmillan Company, 1941, p. 1104. Haden, R. L.: Historical Aspects of Iron Therapy in Anemia, J. A. M. A. **111**: 1059 (Sept. 17) 1938.
2. Castle, W. B., and Minot, G. R.: Pathological Physiology and Clinical Description of Anemias, ed. 2, New York, Oxford University Press, 1936, p. 589.
3. Heath, C. W., and Patek, A., Jr.: Anemia of Iron Deficiency, Medicine **16**: 267, 1937.
4. Price-Jones, Cecil: The Red Cells in Microcytic Anemia, J. Path. & Bact. **35**: 759, 1932.
5. Wintrobe, M. M.: Clinical Hematology, ed. 1, Philadelphia, Lea & Febiger, 1942, p. 484.
6. Parsons, L. G.: Nutrition and Nutritional Diseases, Lancet **1**: 65, 1938.
7. Reimann, F.: Die ferrosensiblen chronischen Chloranämien (Asiderosen), Ztschr. f. klin. Med. **126**: 7, 1934.
8. Occasionally a case is encountered in which the hemoglobin will fall as low as 50 per cent before there is any fall of the red cell level. In these instances the parallel fall begins at whatever level the 0.5 color index is reached, thus maintaining the relationship described.

Because of this red cell lag it is quite apparent that the red cell count is extremely misleading and is of very little value in estimating the actual degree of anemia—i. e., the oxygen carrying capacity of the blood.

It is not difficult to understand the increasing discrepancy between hemoglobin and red cell count as the iron deficiency progresses on a purely mechanical basis—the available hemoglobin must be spread out more thinly to the cells being formed—but the reason for the falling red cell count and the final fixation of the ratio is somewhat more complex in its development. As the iron deficient state becomes full blown and the "available" iron stores become exhausted there is a drain on the ordinarily "unavailable" iron of the tissues, most especially the epidermoid structures (resulting in the typical hair, nail, skin and mucous membrane changes). Concurrently there is an increasing "maturation arrest" of the developing normoblast in the marrow. At first this "maturation arrest" merely produces a "left shift" in erythropoiesis, but eventually fewer and fewer cells reach the point in maturation which enables them to be liberated from the marrow. Ultimately (at a point corresponding to about one-half saturation of the cell with hemoglobin or color index 0.5) the iron deficiency increases to such a degree that not only is hemoglobin synthesis interfered with but nuclear maturation also becomes retarded and apparently even the formation of the cell stroma is impossible.

Along with the series of events outlined there occur specific morphologic changes in the red cell which, to a remarkable degree, parallel the falling color index. In normal blood or in well compensated bleeding the diameter, surface area, thickness, volume and hemoglobin contents are normal. With a fall of the color index to 0.9 the whole cell shrinks but for unit volume maintains its normal hemoglobin content. The cell is thus slightly microcytic. At color index 0.8 the cell has become still smaller and appears distinctly microcytic, with an accentuation of the central pale area due to increased thinness. At color index 0.7 the central pale zone is quite apparent, making the cell hypochromic; but its surface area is not reduced further. At color index 0.6 the hypochromia is quite evident, the majority of cells are very small, though considerable variation in size occurs, and occasional larger cells are present. Elongated cells and cells of bizarre shape appear in greater and greater numbers. At a color index of 0.5 (and the occasional lower levels [9]) the changes have reached their extreme. Poikilocytosis, microcytosis and hypochromia are the outstanding features of the cell, and though anisocytosis is also present it is not much in evidence since no significant numbers of large cells are found. In this range the cell appears to be little but a ring of hemoglobin. This picture is unmistakable and is pathognomonic of a severe "iron deficient state."

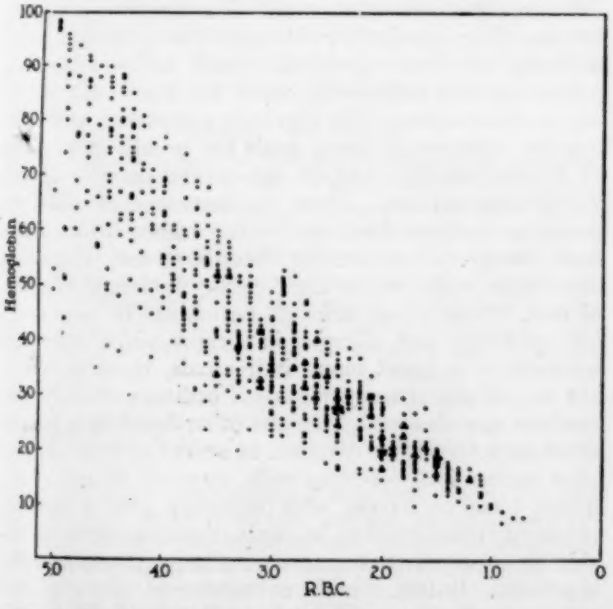


Fig. 1.—Scatter curve, showing distribution of cases with hemoglobins plotted against red blood cells. There is a close correlation between the anticipated and actual scattering of the cases.

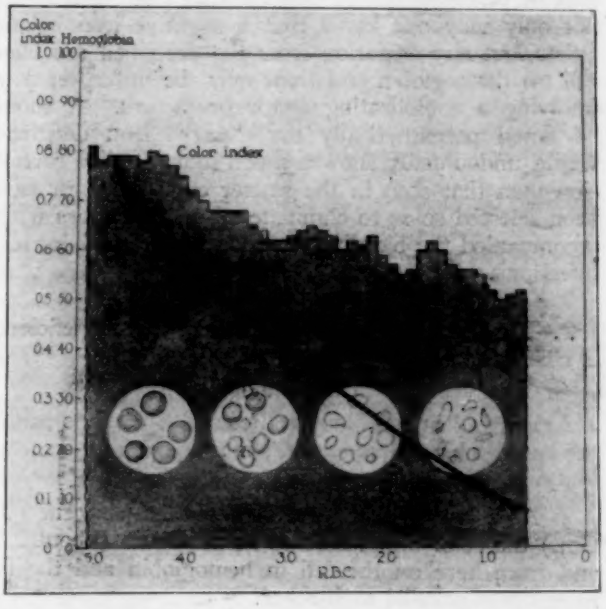


Fig. 2.—Progressive fall in color index with diminishing hemoglobin due to iron deficiency. The morphologic changes accompanying the diminishing color index are portrayed in the insets.

In the development of this picture we have at first simply a readjustment of the cell envelop to the diminished hemoglobin available to it (microcytosis, reduced mean corpuscular volume). The cell envelop is unable to shrink beyond a certain point and therefore the available hemoglobin is less densely distributed (hypochromia, lowered mean corpuscular hemoglobin concentration). Finally, owing to the extreme paucity of iron, the cells are improperly made and the changes in size and shape become prominent (anisocytosis, poikilocytosis).

As the scatter curve indicates (fig. 1), the majority of cases comply rather closely with the expected pattern, but a considerable number fall above and below. The reason for this lies largely in the extreme heterogeneity of the group under analysis. It is obvious that the factors of cardiovascular age, rate of blood loss and protein nutrition alone will be enough to influence the scatter curves appreciably.

The findings herein described have even greater practical than theoretical implications.[10] The mere recogni-

9. The color index may fall to a lower level occasionally. In our series the lowest color index observed was 0.35.

10. Knowing either the hemoglobin or the red cell count, one may calculate the expected color index in the iron deficient state from the following formulas, provided the red cell count is 2.5 million and the hemoglobin 25 per cent (3.9 Gm.) or over:

$$\text{Color index} = \text{RBC (in millions)} \times 0.2$$

$$\text{Color index} = \frac{\sqrt{\text{Hgb.\%}}}{10}$$

tion that the anemia is of the iron deficient type immediately suggests etiology, a program of diagnostic approach, treatment and prognosis. Perhaps most important of these is the recognition that the iron deficiency (as such) can be simply, rapidly and economically treated, since it responds specifically to the administration of peroral iron. From the diagnostic standpoint, not only may one know that a negative iron balance exists, but any deviation from the described red blood cell to hemoglobin relation may be interpreted as implying a complicating factor or factors. It should be noted parenthetically that "pure" iron deficiency would undoubtedly show a much more precise correlation than that seen in the scatter curve had our cases been selected so as to eliminate all added factors which accompanied the bleeding, such as tissue breakdown or infections.

### CONCLUSIONS

1. The development of the anemia of iron deficiency is characterized by

(*a*) A linear fall in the hemoglobin.

(*b*) A fall in red blood cell count which lags behind the hemoglobin fall and results in:

(*c*) A progressive diminution in color index.

2. At a hemoglobin level of about 25 per cent (3.9 Gm.) the color index reaches its minimum (about 0.5) and from here on the fall in hemoglobin and the fall in red cells parallel each other.

3. Characteristic morphologic changes occur in the red blood cells with the falling color index. These appear in the following order: microcytosis, hypochromia, anisocytosis and poikilocytosis.

4. The exact knowledge of red cells to hemoglobin relationship is invaluable in the analysis of anemias.

5. The recognition of the "iron deficient" type of anemia is important because it casts etiologic, therapeutic and prognostic light on the underlying disease.

6. In evaluating the type of anemia and in assaying its physiologic severity the accurate determination of the hemoglobin outranks the importance of the red cell count.

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**Conditions of Behavior.**—There are three types of conditions of behavior: environmental (including, of course, the social environment), physiological and psychological. It is obvious that if personality is to be sought among the conditions of behavior and if personality is to be regarded as something psychological, then it must be sought among the conditions of the third type. This statement should, of course, not be taken to mean that environmental and physiological factors do not condition personality. If, however, personality is one of the conditions of behavior, then environmental and physiological factors condition personality and, thereby, condition behavior in two ways: directly, and indirectly, through the role they play in the development and subsequent alteration of the personality which, having developed, becomes an additional conditioner of behavior. Not to minimize the complexity of the situation, we must not overlook the fact that the physiological factors which condition personality are themselves conditioned by the environment and that the organism undoubtedly plays an important role in conditioning the environment. We may pursue our studies as far as we like, but for the descriptive study of personality, if the term is to be psychologically meaningful, we must look to those conditions of behavior which are psychological in character.—Chein, Isidor: Personality and Typology, in Twentieth Century Psychology, New York, Philosophical Library, 1946.

## FAT AND SUGAR INTOLERANCE AS CAUSE OF GASTROINTESTINAL SYMPTOMS

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Patients with long-continued gastrointestinal symptoms, such as flatulence, belching, heartburn, abdominal pain or discomfort and diarrhea, have always presented difficult problems to the practitioner. The treatment of these patients is often unsuccessful because the cause of such symptoms remains undiscovered. After prolonged and detailed diagnostic studies have failed to demonstrate the presence of significant organic disease, the physician frequently labels the disorder as one that is "functional" in origin. This term, however, is used in a sense that is largely negative—to indicate that there is no demonstrable organic disorder of the gastrointestinal tract. Since this designation is applied to patients with such varied disturbance, one hopes that we soon will understand more fully just what factors produce the "dysfunction" in individual patients. Recently attention has been focused on the emotional and psychic disturbance that may cause gastrointestinal symptoms, and adequate psychotherapy may be successful in relieving those patients who require it. Frequently, however, therapy is limited to rather routine dietary restriction, the use of sedative and antispasmodic drugs and attempts at reassurance. Like all general and nonspecific therapeutic programs, this one often fails.

Some years ago, and particularly since the publication of the studies of Rowe, Vaughan and others, attention was directed to the fact that some of the so-called functional gastrointestinal disturbances are due to sensitivity to certain foods. Although this often amounts to a specific allergy, this need not be the case. As Alvarez noted, many foods provoke digestive symptoms because their physical or chemical characteristics cause difficulty in their digestion. Such foods as onions, cucumbers and radishes, to name but a few, are notorious in this respect. The digestive symptoms which follow the ingestion of these foods are usually nonspecific or nonimmunologic and do not depend on any specific allergic mechanism. They are instances of what we prefer to consider food intolerance rather than specific food allergy. The bloating, heartburn and abdominal discomfort which occur after eating moderate amounts of such substances as radishes, cucumbers or sauerkraut are probably not allergic in origin since they are common to a great many individuals, most of whom are free of digestive symptoms if ordinary dietary precautions are observed. On the other hand, if a patient develops vomiting or diarrhea or severe abdominal pain after eating such foods as milk, eggs or wheat—foods which most of us eat with impunity and which are ordinarily considered to be easily digested—it is reasonable to conclude that a specific allergy to those foods is present. In fact, it is the occurrence of such abnormal reactions after partaking of small amounts of foods that usually cause no reaction, which is most characteristic of true food allergy.

Because it is not always easy to differentiate between food allergy and food intolerance, a difficult diagnostic problem often arises. This is true for the allergist as well as for the general practitioner. If the patient is known to have other allergy disorders and if the

suspected foods are those which are ordinarily easily digested, diagnosis may be relatively simple. If, however, the patient is not known to be allergic and if symptoms are caused by a food which has a reputation for distressing many individuals, it may be quite difficult to decide whether a true allergy exists.

Skin tests, unfortunately, do not always provide the hoped for diagnostic assistance, even if the more sensitive intracutaneous technic is used. There is often no agreement between the reaction given by the patient's skin and that given by his gastrointestinal tract to the introduction of the food in question. On the other hand, a detailed history and a study of the time relationship between the ingestion of foods and the development of symptoms offers a most valuable guide. For this purpose an accurate food diary is most helpful. Elimination diets and diet trials are invaluable in the study of this problem. They are time consuming and require careful control. If properly and faithfully used, however, they often supply the missing link in the chain of diagnostic evidence. Whatever the mechanism responsible for the digestive symptoms, whether this is true allergy or simply a food intolerance, removal of the offending substance from the diet should be carried out in attempting to relieve the patient's symptoms.

For some time we have been interested in the problems of food allergy and food intolerance and have had occasion to study them in many patients. During the course of our investigations our attention has been focused on a type of food disagreement which it has been difficult to classify as allergic. We refer to the patients who develop various gastrointestinal symptoms after ingesting fats or sugars, substances not ordinarily regarded as allergens. We have thought it best to describe these as intolerances to fats and sugars, although it is possible that subsequent studies may show these to be true allergies.

Because of the scarcity of reports on this subject we feel justified in calling attention to it. The nature of the problem is best indicated by description of some of the cases in which it has been encountered.

## REPORT OF CASES

CASE 1.—A man aged 40 had had gastrointestinal symptoms for approximately twenty years. They consisted of epigastric discomfort, belching, heartburn, abdominal soreness and cramps. These had been associated with numerous attacks of diarrhea, during which frequent mucoid and watery stools were passed. Repeated and detailed diagnostic studies, including gastrointestinal and gallbladder x-rays, had revealed no abnormality other than an irritable colon. Treatment had consisted of the usual bland diet and the liberal use of sedatives and belladonna derivatives, with occasional opiates. Although these drugs were useful in controlling distress, the patient was seldom free from the symptoms, which recurred year after year. Diarrhea was particularly troublesome, and for long periods no formed stools were passed.

After numerous investigations it was finally discovered that the patient was sensitive to milk and that taking of even the minute quantities which might be used in cooking other foods would cause abdominal cramps and diarrhea. Although skin tests with milk were negative, the fact that a milk allergy existed was substantiated by clinical trial and by the demonstration of similar sensitivity to milk in other members of his family. It was also discovered that the patient was sensitive to chocolate and to tomatoes. When all of these foods were removed from the diet, symptoms were reduced somewhat although by no means elimnated.

In 1941 the patient had a particularly severe and prolonged attack of abdominal pain and diarrhea. Despite what seemed to be an adequate diet he began to lose weight, the loss finally amounting to 25 pounds (11 Kg.). In an attempt to regain the weight the caloric intake was increased by substantially increasing the quantities of fat and sugar in the diet. For some time prior to this the patient had observed that partaking of large amounts of fats—such as salad oils, fried foods and fat meats—had caused gastric upsets, although lean meats could be taken without difficulty. When large amounts of fats were added to the diet there were violent recurrences of diarrhea. Such substances as egg yolk, butter and the fat of beef could not be tolerated, although small amounts of peanut or coconut oil caused no distress. The ingestion of sugar also induced diarrhea. On one occasion the taking of B-lactose caused severe intestinal symptoms, diarrhea and burning of the anus. Sugar used as candy or in stewed fruits was observed to precipitate additional attacks.

After a great deal of personal experimentation had convinced the patient of his intolerance to fats and sugars, these were eliminated from the diet, except for small amounts of butter. Since goat's milk caused no distress, this was substituted for cow's milk, and saccharin was used instead of sugar. The change in diet was followed by a striking change. Epigastric discomfort, heartburn and eructations disappeared. Abdominal cramps and diarrhea ceased, and for the first time in twenty years the patient passed formed stools; even constipation existed at times. He lost a feeling of malaise and fatigue that had previously been quite annoying and also began to regain some weight. At present his general condition is remarkably improved. Gastric symptoms are negligible, and intestinal upsets occur only after dietary indiscretions. The ingestion of fat and sugars must still be restricted, and when these are taken in appreciable quantities distress recurs. It is to be emphasized, however, that although he cannot eat the fat of chicken, beef or ham, the meats themselves can be taken in large amounts if the fat is removed. It has also been observed that even after a long period of good health a violent attack of diarrhea can be induced by the ingestion of sugar.

CASE 2.—A man aged 42 had suffered with recurring attacks of abdominal pain, flatulence and diarrhea for almost as long as he could remember. These symptoms varied in severity but rarely disappeared for more than an occasional period of one or two days. From time to time extremely severe and prostrating attacks of diarrhea occurred. In addition the patient suffered with occasional migraine headaches. There was no history of hay fever or asthma. The family history was negative for allergic diseases. As a result of personal observation the patient had discovered that the ingestion of certain foods, notably milk, tomatoes and fish, was regularly followed by more severe symptoms.

Detailed studies of the gastrointestinal system, including x-rays, various laboratory procedures and sigmoidoscopy, revealed no evidence of organic disease. By means of elimination diets it was found that the patient was sensitive to milk and cheese, eggs, certain fish and peas. Removal of these from the diet was followed by definite subsidence of the gastrointestinal symptoms and disappearance of the headaches. The patient did not obtain complete relief of his diarrhea, however, and even when avoiding the aforementioned foods and consuming only those which experience had indicated should be tolerated he suffered recurring attacks. After further experimentation with diets it was observed that diarrhea followed the ingestion of fats and that the eating of fats—butter, meat fats and egg yolk—would precipitate looseness of the bowels. When fats were avoided the patient was able to eat all foods except the specific allergens mentioned and to remain symptom free. At present, on no other therapy except observance of his diet he continues without any diarrhea.

CASE 3.—A man aged 35 had suffered attacks of diarrhea for about twenty years. The diarrhea had occurred for long periods without remission and had been associated with severe abdominal pain, with flatulence and also with belching and epigastric discomfort. Over a period of time the patient had noted some relation of his symptoms to the use of certain foods and had gradually eliminated milk, chicken, eggs and oranges from his diet. There was no family history of allergic diseases,

and the patient did not suffer with hay fever, asthma or hives. Repeated studies by numerous physicians had failed to demonstrate the presence of any organic disease of the gastrointestinal tract.

The patient was subjected to an intensive survey and detailed studies of the gastrointestinal tract were carried out. Nothing of significance was demonstrated, although the barium enema revealed moderate irritability and spasm of the colon, and on sigmoidoscopy some excess of clear mucus was found. Complete allergy studies were then performed. By elimination diets and careful use of food diaries, sensitivity to milk, eggs, chicken, orange, tomato, beets and corn was found. When the use of these was discontinued there was definite decrease in symptoms. It was soon discovered, however, that sporadic and apparently causeless attacks of diarrhea occurred even when all known allergens were avoided. After further diet experimentation the patient became aware of the relation between these attacks and his use of fat and sugar. A meal that contained fish was tolerated if the fish was not fried. Eating of fried fish, however, was followed by diarrhea. The same was true of meat. A tiny amount of butter could be taken, but the use of large amounts always induced abdominal cramps and a loose movement. Sugar was found to cause diarrhea if added to tea or coffee, and large amounts of hard candy could not be tolerated.

After a great deal of trial the patient's food tolerances were determined. The allergens mentioned must be avoided, but all other foods, except more than the smallest amounts of fats and sugars, can be taken without ill affect. Very tiny amounts of butter can be used, and a little sugar can be used in the cooking of fruits; but if these restrictions are not observed diarrhea recurs. It has also been noted that the sensitivity to fats is not restricted to specific fats. When other fats, such as soy bean oil or peanut oil, were tried in an attempt to increase caloric intake, the tolerance for these was found to be just as limited as the tolerance for butter fat.

CASE 4.—A man aged 37 was studied originally in 1939 because of allergic rhinitis and so-called sinus headaches. The family history revealed asthma in one brother and late hay fever in another. Complete intracutaneous skin tests revealed sensitivity to house dust, feathers, orris root and many foods. Elimination or avoidance of the offending allergens plus dust desensitization was followed by excellent results, so that at the end of a year desensitization was discontinued.

The patient returned in April 1943 because of recurring migraine headaches, which were becoming increasingly frequent, and also such gastrointestinal symptoms as dyspepsia and occasional diarrhea. He then stated that for many years he had been subject to these symptoms. He had been studied by a gastroenterologist, but no organic disease was found. A tentative diagnosis of "cholecystitis" was made and a low fat diet advised.

As part of the allergic study the patient was placed on a trial diet which was also low in fats and sugars. He was also given histamine injections. The headaches decreased in frequency and severity and his general condition improved. Gastrointestinal symptoms diminished greatly and he became free from indigestion. Diarrhea disappeared. The patient then recalled that he had never been able to tolerate fatty foods or fats in general but stated that this had always been attributed to his "gallbladder condition." When he tried eating fats again symptoms recurred—even the eating of eggs caused distress, presumably from the yolks, because egg white could be used freely. Since avoiding fats he has had few gastrointestinal symptoms or none. He was able to take sugar in any desired quantity, however, and in his case no sugar intolerance was ever noted.

CASE 5.—A woman aged 42 for approximately fifteen years had had recurrent attacks of diarrhea, usually associated with abdominal cramps. Repeated intensive studies had never revealed organic disease of the bowel. Because of the presence of a good bit of nervous tension, a diagnosis of irritable colon of neurogenic origin had been made. The patient came from a family of which various members suffered allergic disturbances. She herself had had hives after taking chocolate and fish and also had had mild angioneurotic edema of unknown origin. She suspected that the ingestion of certain foods—fish, chocolate, excessive coffee and orange—caused diarrhea.

Incomplete skin tests showed sensitivity to chocolate, tomato and spinach. On elimination trial diets improvement occurred, but subsequent additions were not continued long enough to determine definitely foods which were not tolerated. It was found, however, that the ingestion of fats and sugars frequently provoked flatulence and diarrhea and that reducing them often brought an improvement. One event may be described as illustrating the effect of sugar ingestion: while on vacation and at a time when no food had been taken for a number of hours, the patient ate some candy which was made of pure maple sugar; within one hour violent diarrhea occurred. Similar episodes were also recalled by the patient, who has since observed that eating concentrated sweets of any type frequently has a laxative effect, inducing watery bowel movements.

## COMMENT

These few cases illustrate the type of clinical picture which apparently arises from intolerance to fats and sugars, and the histories are similar to those of a number of other patients studied by us. The symptoms may be gastric, intestinal or both. The gastric symptoms include fulness and distress, belching, eructations and heartburn after eating, which are usually known collectively as "indigestion." Because these symptoms develop after fat ingestion, the presence of gallbladder disease is often suspected even though there may be no objective evidence of this.

The intestinal symptoms usually consist of flatulence, cramp-like pains and bowel irregularities, chiefly attacks of diarrhea. The movements are watery or contain excessive mucus. In our patients diarrhea has generally been the most striking complaint and, because no organic bowel disease had been found to explain this, the majority of the patients had been considered to have "irritable colon" or "mucous colitis."

We believe that definite intolerance to fats and/or to sugars was responsible for the symptoms of these patients because of the relief which followed elimination of these substances from the diet or their reduction to extremely small quantities. The intolerance to these substances seems to be generic and not restricted to single fats or sugars. In patients who were sugar sensitive any sugar—cane, malt or dextrose—produced diarrhea, and symptoms even followed the intake of large amounts of starchy food. Fat intolerance was also manifested indiscriminately toward all fats such as butter, vegetable oils, egg yolk and the animal fats taken with fat meats. Difficulty in digestion of the latter class of fats explains why patients could eat a large amount of lean meats such as ham or beef if it was boiled or baked but could not eat the same meats if fried or prepared with the fat retained. The same patient might tolerate white meat of stewed or roast chicken but might have distress after eating fried chicken or even the dark meat of the fowl.

The question of the tolerance of these patients for fats and sugars is, of course, partially a quantitative one. It is almost impossible to maintain a diet which is completely free of fats or sugars. These patients were able to handle the amounts of these substances present in what might be called "invisible quantities" in their foods. Usually, however, they experienced difficulty when the fats and sugars were taken in more than minimal appreciable quantities.

It should be observed that all the patients whom we have encountered with either fat or sugar intolerance have had definite allergies to other foods. Since the

number of patients described is small and since many of the patients were referred specifically for allergy surveys, this fact may merely be coincidental. We are sure that those symptoms will be encountered in persons who can be shown not to suffer with allergy. The large number of patients who claim not to tolerate fatty and fried foods—and who are often erroneously considered to have gallbladder disease—probably includes many who have the form of fat intolerance described here.

Certain aspects of the intolerance to fats and sugars argue against this being due to allergy as this term is generally defined. There is first the fact that no patient was encountered who was intolerant to only one specific fat or sugar. The intolerance seems to be directed against entire classes of these substances, so that it was impossible, for example, to substitute vegetable fats for butter or dextrose for sucrose. It has also been noted that the patients usually were able to eat the protein portions of meat or chicken or egg but could not digest these proteins if they were not separated from the fats naturally associated with them. Since it is generally believed that allergic reactions are developed only against proteins, it would seem that some other explanation must be found to explain these adverse reactions to nonprotein substances.

At present we have no satisfactory explanation for the intolerance to fats and sugars observed in these and other patients. The digestion and absorption of fats is a relatively complicated process. It depends on the presence in the bowel of adequate quantities of bile acids and of pancreatic and intestinal enzymes, and on the ability of the intestinal mucosa to absorb the fatty acids and glycerol, which are the end products of fat digestion. The digestion of sugars is a much simpler process, consisting largely of conversion of polysaccharides to monosaccharides and the absorption of these.

It seems probable that the patients who suffer with fat and/or sugar intolerance have some defect in their ability to absorb these substances. This is suggested by the absence of any demonstrable pancreatic or biliary defect and by the fact that in most instances intolerance for both fats and sugars occurred in the same individual. The absorption of fats and sugars alike is dependent on a process known as phosphorylation—combination with phosphates for transportation across the mucosal barrier of the intestinal wall. These patients, therefore, may have some disturbance which interferes with phosphorylation so that absorption of both fats and sugars is inadequate. If unabsorbed sugar and fatty acids are permitted to accumulate in the bowel, symptoms may develop quite promptly. The sugars not only undergo fermentation with consequent gas formation but also have a hydrophilic and therefore a laxative effect. The undigested fats also act as intestinal irritants both because of the bulk of accumulated fat and because of the local mucosal action of the fatty acids.

### CONCLUSIONS

A group of patients had numerous gastrointestinal symptoms, presumably the result of intolerance to fats and sugars. The symptoms consisted of epigastric fullness, belching, eructations, abdominal pain and bowel irregularities, notably diarrhea.

These symptoms were encountered in patients who were known to have food allergies, but we are of the opinion that the symptoms noted were due to "intolerance" to fats and sugars rather than to allergy in the ordinary sense.

Although the mechanism of the intolerance to these foods is not understood, some defect in their absorption probably exists.

Intolerance to fats and sugars may be a more frequent cause of gastrointestinal symptoms than is usually suspected.

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## PROLONGING THE EFFECTS OF PENICILLIN BY CHILLING

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The virtues of a new curative substance are quickly broadcast; its limitations are examined later at more leisure. The ephemeral power of penicillin has set clinicians and scientists working on methods of prolonging its effective action, aiming to make unnecessary the renewal of intramuscular doses every few hours. Effective and prolonged blood levels have been obtained by using a penicillin beeswax-peanut oil mixture.[1] We have approached the problem from a different angle, using a simple method of chilling the area of injection [2] in order to retard the absorption of the penicillin by slowing the circulation around the site of the injection. For evaluating effectiveness of a new technic like chilling, it was decided to make the tests in gonorrhea cases, both because these were available and because they afford a good basis for study owing to the uniformity of the infection and the reliable criteria as to cure.

### EFFECTS OF CHILLING ON CIRCULATION

The velocity of nearly all biologic processes, including those of sensation, varies directly with the temperature. Barcroft and Edholm [3] measured by means of a plethysmograph the blood flow in the human forearm after the limb had been placed in a constant temperature water bath for two hours. "The point at which the temperature was measured was about 1 inch below the skin covering the brachioradial muscle not far from the middle of the forearm." The temperatures employed ranged from 13 to 45 C. In all, seventy experiments were carried out on 5 normal men aged 25 to 40. They found that the average forearm blood flow ranged from 0.5 cc. per hundred cubic centimeters per minute at 13 C. to a speed of 5.9 cc. per hundred cubic centimeters per minute at 37 C. (cubic centimeters per hundred cubic centimeters arm volume per minute).

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This study was conducted with the cooperation of Lieut. Comdr. A. M. Hutter, MC (S), U.S.N.R., Lieut. Comdr. J. E. Drew, MC (S), U.S.N.R., Lieut. C. R. Spealman, H(S), U.S.N.R., P. V. Lucht, PhM2/c, V6, P. J. Cimock, PhM3/c, V6, SV, R. A. Funfar, PhM3/c, V6, U.S.N.R., and J. M. Ruder, PhM3/c, U.S.N.R.

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2. Trumper, Max, and Hutter, A. M.: Prolonging Effective Penicillin Action, Science **100**: 432 (Nov. 10) 1944.

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This principle of the effect of temperature on body processes underlies the refrigeration methods used in surgery to create anesthesia for amputation cases.[4] The exact degree of coldness, however, best suited to insure both absence of sensation and safety from tissue trauma has not been agreed on, so that arbitrary standards still prevail.[5]

For our chilling technic we made, by means of a thermocouple, studies of the muscle temperature of 18 patients and found that by maintaining an ice bag around the upper shoulder for two hours the mean temperature in the deltoid muscle ½ inch below the skin was 17.3 C. (63 F.). This was sufficiently cold to insure absence of sensory function, obviating the pain of injection, and to retard the high rate of absorption of the pencillin, yet it afforded a wide margin of safety from danger of tissue trauma by freezing.

In order to learn the rate at which the muscle temperature returned to normal, a series of readings were then taken, commencing two minutes after removal of the ice bag and continuing every two minutes for one hour. The first reading showed the average temperature of the deltoid muscle ½ inch below the skin in the 18 cases to be 17.3 C. At the end of one hour the temperature averaged 29.5 C., which is equivalent to a rise in temperature of 1 degree C. every five minutes. Two additional cases under the same conditions showed temperatures so different from the other 18 cases that they have been grouped separately. In these 2 cases the temperature obtained two minutes after removal of the ice bag averaged only 24.5 C., and at the end of one hour the temperature averaged 35 C., which is equivalent to a rise of 1 degree every 5⅔ minutes.

Equipment for tests.

### EQUIPMENT

The equipment used for the tests consisted of a circular ice bag of about 80 ounce capacity containing crushed ice and held in place by a supporting harness.[2] Later this harness was replaced by a half vest, to which the ice bag was fastened by a cloth holder snapped on to the vest so that it could be removed readily. The vest was held in place by two belts, and an elastic strap fastened the ice bag holder securely to the upper arm, and two small tapes tied the holder to the vest, as illustrated in the accompanying sketch.

### TECHNIC

The chilling procedure may be summarized by the following directions which were issued to ward personnel:

1. Two hours prior to the injection of penicillin, fill the ice bag 90 per cent full of crushed ice.
2. Before closing the bag squeeze out all excess air and repeat one hour later, so that the bag can be molded around the deltoid muscle.
3. Enclose the ice bag in the shoulder bag and place on the upper arm and shoulder, fasten it to the vest in the position indicated in the sketch and see that it is maintained there for two hours.
4. Chill the bottle of penicillin (100,000 units in 10 cc. of saline solution) in crushed ice for at least five minutes prior to the injection.
5. With a ½ inch hypodermic needle in a cool syringe, inject the chilled penicillin slowly into the deltoid muscle.
6. Replace the ice bag immediately and maintain it around the deltoid area for twelve hours, renewing the ice every few hours as needed.

### CRITERIA FOR CURE

If both the smear and the culture of the prostatic secretion obtained forty-eight hours after the cessation of the urethral discharge were negative, the patient was considered cured. He was kept under observation, however, for a few additional days.

*Clinical Results.*—Three groups of patients, classified according to the dosage given, yielded the results in cures and failures given in the table after a single injection of penicillin according to the chilling technic.

Group A.—The potency of the penicillin undoubtedly affected the results. The first 15 patients, all treated with the same batch of penicillin, were cured. The next 7 patients were treated with the same dosage of a different batch of penicillin. Five of these 7 were not cured. Assays of penicillin used for these 7 patients showed it to be of reduced potency.

Group B.—Of the 35 patients treated with 70,000 units, 5 were those whose treatment with 50,000 had failed to effect a cure. Of these, 3 were cured when the dosage of 70,000 was administered. The remaining 2 were each treated with a total of 140,000 units in seven injections at two and one-half hour intervals. This resulted in 1 cure and 1 failure. The patient who was not cured when treated with first 50,000, then 70,000 and later 140,000 units for a gonorrheal infection was also being treated with oxophenarsine hydrochloride (mapharsen) and a bismuth compound for syphilis. He was finally given 2.4 million units of penicillin for the treatment of the syphilitic infection, which cured his gonorrhea.

All failures in group B were cured with the 140,000 units in seven injections at two and one-half hour intervals.

Group C.—Of the 4 failures in this group of 43 patients (each given 100,000 units) all were cured by retreatment with 140,000 units administered in seven injections at two and one-half hour intervals.

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5. Talbott, J. H.: Physiologic and Therapeutic Effects of Hypothermia, New England J. Med. **224**: 281, 1941. Large, Alfred, and Heinbecker, Peter: Refrigeration in Clinical Surgery, Ann. Surg. **120**: 707 (Nov.) 1944.

COMMENT

The effectiveness of penicillin has proved so remarkable that we are just beginning to learn of its limitations. To date there have been relatively few reports emphasizing penicillin failures. Bloomfield, Kirby and Armstrong [6] in such a study stressed the fact that "in studying a new therapeutic agent it is necessary not only to discover the conditions in which it is effective but also to determine the circumstances under which it fails or at least yields unsatisfactory results." Therefore we have studied those cases which failed to be cured by the lower dosage. Our experience has been that the potency of the penicillin, the resistance of the patient and the duration of the infection prior to treatment are all important factors. Therefore the dosage of 100,000 units, but preferably 140,000 or 150,000 units, is needed to cover all the variations involved. The wide variations in potency have been observed previously by investigators with extensive clinical experience. This variation has been attributed by one of us [7] to the inexact methods of assay. Sternberg and Turner [8] reported that their dosage schedules were only approximate, because assays were subject to an error of plus and minus 25 per cent. They state that in two hospitals certain lots of the drug resulted in a 50 per cent failure at the 50,000 unit schedule of treatment. On the other hand, only 9 per cent failures were obtained in 137 cases treated with 40,000 units of penicillin. These observations were confirmed and extended by Riba, Schmidlapp and Bosworth,[9] who reported 23.6 per cent failures in 233 gonorrheal patients that had received 50,000 units (10,000 every three hours). Of these 55 failures, 48 were retreated successfully with 100,000 units (10,000 every three hours).

In a study such as this, the selection of controls is always difficult. The military hospital must attempt to return all patients to duty as quickly as possible, and one cannot therefore compare effective therapy with ineffective therapy on alternate patients. A recent report on the effect of gonorrhea of a single injection of 100,000 units of penicillin in aqueous solution has been published.[10] Of 58 cases so treated only 24 were cured, that is 58.6 per cent failed. One small series in which the penicillin was mixed with globin or albumin [7] and injected as a single dose of 100,000 units showed that 45 per cent failed.

The 100,000 unit dose seems to be the minimal amount which, when administered in divided dosage or in single injection when mixed with beeswax and peanut oil, or in single injection with the chilling technic can be relied on to cover variations in potency and resistance to infection and to yield 90 per cent cures in uncomplicated gonorrhea. With the recent abundant production of penicillin and its lowered cost, together with the wide margin of safety as to its toxicity, the need for minimal dosage no longer exists except for purposes of studying the mechanisms of its activity and the incidence of relapses or recurrent infections.

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To attain cures of 95 per cent or more a larger dosage is required, 140,000 or 150,000 units intramuscularly within fifteen hours.[11] The maximum dosage used in our present studies on uncomplicated gonorrhea was 140,000 units (seven injections at two and one-half hour intervals), which proved successful in all the retreated cases in which it was used. Thus, no examples of penicillin fastness were observed.

In studying our failures with the 50,000 unit dosage, a factor appeared which, if confirmed by a larger number of cases, may prove significant. That factor is the duration of the infection prior to treatment and the role of the defense mechanisms of the body in enabling the penicillin to effect a cure.

The 5 patients who failed to be cured with 50,000 units had, when admitted, a urethral discharge on the average of one and seven-tenths days' duration and their white blood cell counts averaged 7,090. The patients who were cured with 50,000 units had when admitted a urethral discharge on the average of six days' duration and their white blood cell counts averaged 9,760.

In the group of patients treated with 70,000 units the duration of the discharge of the 5 who failed also averaged one and seven-tenths days, in contrast to seven days' duration in those cases that were cured. The differences in white blood cell counts were not significant.

*Results in Three Groups of Patients*

| Group | Penicillin Dosage, Units | Patients Treated, Number | Patients Cured, Number | Patients Failed, Number | Patients Failed, per Cent |
|---|---|---|---|---|---|
| A | 50,000 | 22 | 17 | 5 | 22.7 |
| B | 70,000 | 35 | 30 | 5 | 14.3 |
| C | 100,000 | 43 | 39 | 4 | 9.3 |

In the group of patients treated with 100,000 units, the duration of the urethral discharge of the 4 who failed averaged one and seven-tenths days; that of the cured cases averaged three and three-tenths days. The differences in white blood cell counts were not significant.

The theory that in uncomplicated cases the longer the duration of the infection prior to treatment the easier it is to obtain a cure is borne out only by groups given borderline dosage. Since the higher dosage cured irrespective of the duration of the infection or the height of the white blood cell count, it obscured the role of the body's defense mechanisms.

From our limited experience in this study it seems probable that a duration of the infection of at least six to seven days is a factor in determining the percentage of cures by penicillin therapy with borderline dosage, but that its role is difficult to ascertain when using dosages of 100,000 units or more.

This experience is in accord with that of sulfonamide therapy in gonorrhea. Long and Bliss [12] in their monograph on sulfonamide drugs present a number of reports in which the rate of cure in simple gonorrhea was always higher in the chronic than in the acute infection. They observed a definitely greater incidence of

11. Thompson, Gershom J.: Unpublished data, National Naval Medical Center. Jones, T. R.; Maitland, F. G., and Allen, S. J.: Penicillin in Gonorrhea: Suggested Scheme of Treatment, Lancet **1**: 368 (March 24) 1945.
12. Long, P. H., and Bliss, Eleanor A.: The Clinical and Experimental Use of Sulfanilamide, Sulfapyridine and Allied Compounds, ed. 1, New York, Macmillan Company, 1939, p. 319.

relapse in individuals whose infections were treated on the first to the seventh day of the infection in contrast to those whose infections were eight or more days old. Cokkinis and McElligott [13] advanced the theory that, the longer treatment is delayed, the more chance there is for the body to acquire immunity and to dispose of the organisms arrested by sulfanilamide. Support of this is provided by the complement fixation test, which rarely becomes positive before the second week.[12]

Various investigators [14] have reported that sulfonamide resistant gonorrhea can be effectively treated with penicillin in relatively small dosage. This can be attributed either to the greater potency of the penicillin used or to the fact that the duration of the infection had progressed to the point where antibodies were being produced in quantities sufficient to be an influential factor in determining the response to therapy.

Our views are in accord with the opinion expressed by Florey and Jennings [15] that "the good effects of penicillin depend on simultaneous action by the leukocytes and other defense mechanisms of the body which deal with the bacteria while multiplication is held in check by the penicillin."

### SUMMARY AND CONCLUSIONS

One hundred patients with uncomplicated gonococcic urethritis were treated with a single dose of from 50,000 to 100,000 units of penicillin dissolved in saline solution and injected into the deltoid muscle, which was chilled before and after the injection.

Results from dosages of 50,000 and of 70,000 units gave cures of 77.3 per cent and 85.7 per cent respectively.

The 100,000 unit dosage cured 91 per cent of the patients. This percentage compares favorably with the results obtained by others using multiple injections as well as the single injection of 100,000 units of penicillin in mixtures of beeswax and peanut oil.

It can be concluded from the high percentage of cures that the chilling technic prolonged the effective action of penicillin, reduced to one the number of injections required to treat uncomplicated gonorrhea and rendered that injection painless, all of which was accomplished without introducing any other foreign substance intramuscularly.

13. Cokkinis, A. J., and McElligott, G. L. M.: Sulfonamide in Gonorrhea: Analysis of 633 Cases, Lancet **2**: 355, 1938.
14. Mahoney, J. F.; Ferguson, C.; Bucholtz, M., and Van Slyke, C. J.: The Use of Penicillin Sodium in the Treatment of Sulfonamide Resistant Gonorrhea in Men, Am. J. Syph., Gonor. & Ven. Dis. **27**: 525 (Sept.) 1943. Herrell, W. E.; Cook, E. N., and Thompson, L.: Use of Penicillin in Sulfonamide Resistant Gonorrheal Infections, J. A. M. A. **122**: 289 (May 29) 1943. Dawson, M. H., and Hobby, G. L.: The Clinical Use of Penicillin: Observations in 100 Cases, ibid. **124**: 611 (March 4) 1944. Cook, E. N.; Pool, T. L., and Herrell, W. E.: Further Observations on Penicillin in Sulfonamide Resistant Gonorrhea, Proc. Staff Meet., Mayo Clin. **18**: 433 (Nov. 17) 1943. Cohn, A.; Studdiford, W. E., and Grunstein, I.: Penicillin Treatment of Sulfonamide Resistant Gonococcic Infections in Female Patients, J. A. M. A. **124**: 1124 (April 15) 1944.
15. Florey, H. W., and Jennings, M. A.: Penicillin: Special Issue, Brit. J. Surg., July 1944, p. 112.

**Food Inspection.**—The principles of good food preservation are very simple. They depend on the facts that: 1. Food spoilage is due largely to bacterial action. Thus, bacterial control results in food preservation. 2. Bacteria require certain favorable conditions for development. In general, they require (*a*) a suitable —usually warm—temperature, (*b*) moisture, (*c*) protein food and (*d*) a favorable medium for growth. For example, a high concentration of salt or sugar will check the growth of many bacteria.—Smillie, Wilson G.: Preventive Medicine and Public Health, New York, Macmillan Company, 1946.

## TUBERCULOSIS AND ANAL FISTULA

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In 1939, together with Smith, we [1] reported a study of 206 consecutive patients who had anal fistulas and we considered the part tuberculosis plays in the disease. Since that time we have had the opportunity to study a larger series of patients and these, together with the 206 previously studied, compose the 600 patients on whom this report is based.

Opinions have varied widely as to the percentage of anal fistulas that are tuberculous and as to the part tuberculosis plays in anal fistulas. There are two reasons for the variance of opinion. The first is that the criteria on which the diagnosis is made differ. At one extreme are those who make demonstration of the tubercle bacillus in the fistula a requisite for positive diagnosis. At the other extreme are those who feel that the clinical picture, or even the demonstration of tuberculosis elsewhere in the body, is enough to establish the diagnosis of a tuberculous fistula. The second reason for the variance of opinion is the difference in the source of the material investigated. For example, figures or percentages from a tuberculosis sanatorium would be different from those from an institution in which the treatment of tuberculous patients is not the primary interest.

### METHODS OF DETERMINING THE TUBERCULOUS OR NONTUBERCULOUS NATURE OF AN ANAL ABSCESS OR FISTULA

*Inspection.*—Many writers and investigators have felt that a tuberculous abscess or fistula has certain peculiar characteristics which make clinical diagnosis possible. It is not our purpose in this discussion to go into these characteristics. In our experience conclusions drawn from such a study, if lacking in scientific corroboration, have been of little value.

*Guinea Pig Inoculation.*—Some workers, particularly Martin and Sweany [2] and Fansler,[3] have questioned the reliability of guinea pig inoculation as a means of determining the tuberculous nature of anal fistulas. The reasons that can be offered against reliability of the method are the following: 1. It may yield a false positive. That is, the cause of the fistula may not be tuberculosis, yet micro-organisms of tuberculosis may have entered the fistula through its enteric opening. 2. It may yield a false negative. That is, the cause of the fistula may be tuberculosis, yet viable bacilli may not have been injected into the guinea pig or, having been injected, on rare occasions may not have been in sufficient number to give rise to tuberculosis in the body of the animal. Feldman and Magath,[4] however, on the basis of vast experience, have expressed the opinion that guinea pig inoculation warrants confidence in its reliability as a means of designating the tuberculous nature of clinical material.

From the Section on Proctology, Mayo Clinic.
1. Buie, L. A.; Smith, N. D., and Jackman, R. J.: The Role of Tuberculosis in Anal Fistula, Surg., Gynec. & Obst. **68**: 191-195 (Feb.) 1939.
2. Martin, C. L., and Sweany, H. C.: Tuberculous Anal Abscess and Fistula: Criteria for Diagnosis, Surg., Gynec. & Obst. **71**: 295-296 (Sept.) 1940.
3. Fansler, W. A.: The Relationship of Tuberculosis to Fistula in Ano, J. A. M. A. **85**: 671-673 (Aug. 29) 1925.
4. Feldman, W. H., and Magath, T. B.: The Reliability of Guinea Pig Inoculation in the Diagnosis of Tuberculosis, Am. Rev. Tuberc. **24**: 312-325 (Sept.) 1931.

Therefore it will be considered here that a negative result of guinea pig inoculation is dependable but, as shown by Martin and Sweany, that a positive result in a tuberculous patient with positive sputum is subject to error because fecal contamination may have occurred.

*Histopathologic Examination.* — McDonald [5] stated that the histologic picture of tuberculosis is definitive if the typical picture is seen. This picture will not be described here. The errors in histopathologic diagnosis of tuberculosis are those of inadequate sampling and, as Sweany [6] stated, the adequacy of the sampling depends on the experience of the one who takes the specimen. He stated that if samples are carefully and repeatedly taken, and if serial sections are made and carefully studied, the histologic diagnosis rarely will be erroneous. The laborious procedure of making and studying serial sections is a discouraging task when a relatively simple procedure such as guinea pig inoculation is available.

*Combination of Clinical and Histologic Examination and Guinea Pig Inoculation.*—In the examination to find whether a fistula is tuberculous or nontuberculous, clinical aspects, histologic examination and guinea pig inoculation all should be taken into consideration. If a specimen of fistula is taken from a patient who has pulmonary tuberculosis, possibly that fistula is tuberculous, but if guinea pig inoculation and further microscopic studies give negative results it should be considered nontuberculous. These three factors were considered in this study. Each of the findings was evaluated and compared with the other two.

TABLE 1.—*Results of Primary Study*

| | Cases | | Evidence | | | |
|---|---|---|---|---|---|---|
| Group | Number | Per Cent of 600 | Clinical | Roentgenologic | Histologic | Guinea Pig |
| 1 | 478 | 79.6 | Negative | Negative | Negative | Negative |
| | 49 | 8.2 | Childhood Ghon | Negative | Negative | Negative |
| | 527 | 87.8 | | | | |
| 2 | 21 | 3.5 | Positive | Positive | Positive | Positive |
| 3 | 19 | 3.2 | Positive | Positive | Negative | Negative |
| 4 | 18 | 3.0 | Positive | Positive | Negative | Positive |
| 5 | 9 | 1.5 | Negative | Negative | Negative | Positive |
| 6 | 6 | 1.0 | Negative | Negative | Positive | Negative |
| Total | 600 | 100.0 | | | | |

## MATERIAL AND METHOD

It is emphasized that the patients included in this study presented the variety of complaints encountered in general practice. Including the 206 cases which formed the basis of our report, made with Smith in 1939, 618 consecutive cases in which operation was performed for anal fistula came under consideration. Before surgical operation each patient underwent physical examination, and routine studies of the blood and urine were performed. In addition to this, a roentgenogram of the thorax of each patient was made. Also sigmoidoscopy and, if indicated, other special studies, such as examinations of sputum, were carried out. At the time of the operation the surgeon took particular care to dissect out the fistulous tract. Half was sent for gross and microscopic examination; for the latter, from two to five sections were stained with hematoxylin and eosin. The other half was used for guinea pig inoculation.

The foregoing procedure could not be followed in full in 18 cases and they were eliminated from the study. Thus 600 cases remained for complete and successful study.

## RESULTS

The results of the investigation are presented in the accompanying tables, of which table 1 is concerned with the primary study. Therein it will be noted that cases of group 1 were negative in all respects, for we consider that if the only evidence of tuberculosis found in a given case consists of a healed, childhood type of lesion, or a Ghon primary complex, the findings are, to all intents and purposes, negative. In group 2 all evidence was recorded as positive. In group 3 results of histologic examination and guinea pig inoculation were negative whereas clinical and roentgenologic evidence was positive. However, it is generally agreed that a tuberculous lesion of the lungs may coexist with a nontuberculous anal fistula. Therefore, concerning groups 1, 2 and 3, no particular questions arise.

However, in groups 4, 5 and 6, results of histologic examination and guinea pig inoculation did not agree and questions do arise. In group 4 did guinea pig inoculation give a false positive result or were insufficient sections studied microscopically? In group 5 were we dealing with a primary tuberculous fistula; did guinea pig inoculation give a false positive result; were lesions overlooked in histologic or, for that matter, in clinical, examination? In group 6 was the histologic evidence correct and all other evidence deficient?

In view of these questions, Drs. A. C. Broders and J. R. McDonald of the Division of Surgical Pathology made histologic reexamination of the material representing these groups. In many instances the reexamination necessitated the making of serial sections stained with hematoxylin and eosin and, when still further

TABLE 2.—*Results of Histologic Reexamination (the Restudy)*

| | Cases | | Diagnosis | |
|---|---|---|---|---|
| Group | Number | Per Cent of 600 | Reversed to | Remained |
| 4 | 12 | 2.0 | Positive | |
| | 6 | 1.0 | ..... | Negative |
| 5 | 6 | 1.0 | Positive | |
| | 3 | 0.5 | ..... | Negative |
| 6 | 4 | 0.7 | Negative | |
| | 2 | 0.3 | Questionable (called positive) | |

TABLE 3.—*Results of Combining Tables 1 and 2*

| | Cases | | Evidence | | | |
|---|---|---|---|---|---|---|
| Group | Number | Per Cent of 600 | Clinical | Roentgenologic | Histologic | Guinea Pig |
| 1 | 531* | 88.5 | Negative | Negative | Negative | Negative |
| 2 | 33† | 5.5 | Positive | Positive | Positive | Positive |
| 3 | 19 | 3.2 | Positive | Positive | Negative | Negative |
| 4 | 6 | 1.0 | Positive | Positive | Negative | Positive |
| 5 | 3 | 0.5 | Negative | Negative | Negative | Positive |
| 6 | 2 | 0.3 | Negative | Negative | Positive | Negative |
| 7‡ | 6 | 1.0 | Negative | Negative | Positive | Positive |
| Total | 600 | 100.0 | | | | |

* The included new cases were histologic negatives derived on reexamination from group 6 of table 1. See explanation in text.

† The included new cases were histologic positives derived on reexamination from group 4 of table 1. See explanation in text.

‡ This new group was formed when, on reexamination, reversal of the histologic diagnosis in 6 cases of group 5 of table 1 required their removal from that group. See explanation in text.

5. McDonald, J. R.: Personal communication to the authors.

6. Sweany, H. C., quoted by Martin, C. L., in Goldberg, Benjamin: Clinical Tuberculosis, Philadelphia, F. A. Davis Company, 1942, vol. 2, pp. 1149-1150.

examination was necessary, by the Ziehl-Neelsen method or the auramine technic. This resulted in reversal of the histologic diagnosis in two thirds of the cases of each of the groups 4, 5 and 6 (table 2). The restudy demonstrated the importance of examining many sections of fistulous tissue to determine its tuberculous or nontuberculous nature.

On the basis of results of the restudy, the quantities recorded in table 1 were modified and table 3 resulted. The redistribution, which allowed table 3 to be formed from table 1, took place in the following ways: On restudy, reversal of the histologic diagnosis in 4 cases of group 6 caused these cases to conform to the all negative pattern of the original group 1 (table 1); therefore, in the redistribution, these 4 cases were added to group 1 (table 3). Also, on restudy, reversal of the histologic diagnosis in 12 cases of group 4 caused these cases to conform to the all positive pattern of the original group 2 (table 1); therefore, in the redistribution, these 12 cases were added to group 2 (table 3). However, reversal on restudy of the histologic diagnosis in 6 cases of group 5 did not cause these cases to conform to any of the original patterns (table 1) and, in the redistribution, group 7 came into being (table 3). It is evident that, on restudy, the incidence of agreement between the results of histologic examination and guinea pig inoculation was increased.

### COMMENT

From the foregoing report of the primary and subsequent study, certain questions can be answered with a fair likelihood of the answers being accurate.

1. Should the presence of an anal fistula arouse the suspicion that pulmonary tuberculosis or a tuberculous focus is present in the body? Our study of 600 cases in which anal fistulas were present indicates that in a majority (88.5 per cent) there was no tuberculosis, either in the fistulas or elsewhere in the body, while in 11.5 per cent evidence of tuberculosis was found somewhere in the body. This figure of 11.5 per cent is sufficiently high to enable one to answer the foregoing question in the affirmative.

2. Is the tubercle bacillus a primary or a secondary invader of an anal fistula? In 3 cases, or 0.5 per cent (table 3, group 5), inoculation of a guinea pig with material from a fistula gave a positive result; in 2 cases, or 0.3 per cent (table 3, group 6), results of histologic examination only of the fistula were positive, and in 6 cases, or 1 per cent (table 3, group 7), both gave a positive result; yet in these 11 cases no focus of tuberculosis could be found elsewhere. We are unable to explain this, but as nearly as we could determine in this small group the fistula was primarily tuberculous. Fundamentally, however, it is impossible to answer the foregoing question from this study, nor are we familiar with any method available to answer such a question conclusively.

3. What percentage of anal fistulas are tuberculous? Our study would indicate that a relatively small number (7 to 8 per cent) of anal fistulas are tuberculous and in nearly all instances (thirty-three out of thirty-nine) in which they are unmistakably tuberculous there is a focus elsewhere in the body. The rounded percentages given in the previous sentence are derived from table 3, wherein groups 2 and 7 represent unmistakably tuberculous fistulas (6.5 per cent) and groups 4, 5 and 6 represent fistulas concerning the tuberculous nature of which some question remains (1.8 per cent). The total of these two percentages is 8.3.

4. What is the most satisfactory method of determining the tuberculous or nontuberculous nature of an anal fistula? If the guinea pig inoculation is successfully carried out and the result is negative, further examination should not be necessary. If it is positive and the histologic examination does not reveal tuberculosis, the possibility has to be considered that the tissue injected into the guinea pig was contaminated.

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## DIABETIC NOCTURNAL DIARRHEA

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Diarrhea in diabetic patients is always a troublesome and often a serious complication. Our purpose in this report is to describe a syndrome characterized by intermittent nocturnal diarrhea in patients with diabetes mellitus.

In 1936 Bargan, Bollman and Kepler [1] reported 2 cases in which a tentative diagnosis of "diarrhea of diabetes" was made and stated that no failure of pancreatic external secretion could be demonstrated. In their cases the administration of pancreatic extract did not correct the disorder. Joslin, Root, White and Marble [2] also have discussed the association of nocturnal diarrhea and diabetes. The first case of nocturnal diarrhea in this clinic occurred in 1912.

Forty patients with this complication who had hospital studies and follow-up observations were selected for this investigation. The characteristic symptomatology of this syndrome is intermittent nocturnal diarrhea consisting of brown watery stools in a patient with diabetes mellitus. The intermittent character of the diarrhea was a striking finding in 34 of the 40 cases, while nocturnal incontinence of feces occurred in 31 cases.

Following is a representative case:

A. H. S., a man aged 25, developed severe diabetes requiring 60 units of insulin daily in September 1929. His diabetes was poorly controlled from the start. In August 1935 he developed a nocturnal diarrhea of eight to ten watery stools which showed no gross blood, mucus or pus. A barium enema and an upper gastrointestinal x-ray revealed only hypermotility of the intestinal tract. Proctoscopy was negative.

The feces did not show evidence of parasites, and cultures did not reveal abnormal organisms. Microscopically only occasional fat droplets, a few undigested muscle fibers and a few starch granules were seen. No macroscopic blood was detected. Several benzidine tests varied from 0 to ++. A quantitative fat estimation of the stools for seventy-two hours revealed 1.4 per cent, or an average of 11 Gm. of fat in twenty-four hours. An Ewald test meal revealed no free hydrochloric acid, and the total acidity was 30 degrees. Examination of the duodenal contents revealed normal proteolytic, slightly reduced lipolytic and definitely reduced amolytic enzymes. Agglutination for typhoid, paratyphoid and dysentery organisms was negative.

From the George F. Baker Clinic, Elliott P. Joslin, medical director. Dr. Sheridan is Fellow in Medicine, George F. Baker Clinic. Dr. Bailey is Research Fellow in Medicine, Harvard Medical School, and physician, New England Deaconess Hospital.

1. Bargan, J. A.; Bollman, J. L., and Kepler, E. J.: "Diarrhea of Diabetes" and Steatorrhea of Pancreatic Insufficiency, Proc. Staff Meet., Mayo Clin. **2**: 737 (Nov. 18) 1936.

2. Joslin, E. P.; Root, H. F.; White, Priscilla, and Marble, Alexander: Treatment of Diabetes Mellitus, ed. 7, Philadelphia, Lea & Febiger, 1940, p. 465.

The patient was placed on a low residue diet and given dilute hydrochloric acid 60 drops daily, tincture of belladonna 30 drops daily and several costive drugs including bismuth (subcarbonate) and paregoric, all of which failed to relieve the diarrhea. Crude liver extract was then tried intramuscularly in 2 cc. daily doses with striking improvement and a reduction of the number of stools to only one or two daily.

The nocturnal character of this type of diarrhea is the most striking symptom. Patients frequently are troubled little or none at all during the day yet may have eight, ten or more stools at night. The stools in all cases were watery and unlike the frothy, bulky, odorous stools found in steatorrhea. Incontinence of feces during sleep is a most embarrassing feature.

The intermittent character of this diarrhea is also striking, and spontaneous remission is usually followed in a few days or weeks by a recurrence. The effectiveness of treatment is difficult to evaluate without follow-up studies because of this tendency to temporary spontaneous improvement.

*Gastric Analysis.*—Achlorhydria, even after histamine, was found in 14 of the 29 patients whose gastric contents were examined. The remaining 15 patients had free hydrochloric acid averaging 25 degrees. Achlorhydria has been estimated to occur in 30 to 40 per cent of all diabetic patients,[3] and Root [4] has emphasized that its frequency tends to increase with the duration of diabetes as well as with the age of the patient.

*Spinal Fluid.*—Eighteen cases were studied with spinal fluid determinations. The cell count in every case was found to be within normal limits. Seventeen of the 18 cases showed a definite elevation of the total protein averaging 88 mg. In one third of them (6 cases) the total protein was more than 100 mg. These findings suggest the presence of a neurogenic disturbance in the central nervous system.

*Observations in Forty Cases*

| Case No. | Sex | Age at Onset of Diarrhea | Duration of Diabetes, Years | Total Insulin Dose, Units | Watery Nocturnal Diarrhea | Nocturnal Incontinence | Intermittent Character | Neuritis | Spinal Fluid Total Protein | Liver Extract Response |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ♀ | 36 | 11 | 46 | Yes | Yes | Yes | Yes | ... | Decided improvement |
| 2 | ♀ | 20 | ¼ | 22 | Yes | No | Yes | No | ... | Not given |
| 3 | ♂ | 49 | 13 | 38 | Yes | Yes | Yes | Yes | ... | Moderate improvement |
| 4 | ♂ | 61 | 9 | 16 | Yes | Yes | Yes | Yes | 87 | Not given |
| 5 | ♂ | 35 | 6 | 42 | Yes | Yes | Yes | Yes | 121 | Not given |
| 6 | ♂ | 35 | 14 | 38 | Yes | Yes | Yes | No | ... | Decided improvement |
| 7 | ♀ | 69 | 20 | 28 | Yes | Yes | Yes | Yes | 35 | Moderate improvement |
| 8 | ♀ | 52 | 8 | 26 | Yes | .... | Yes | Yes | 70 | Not given |
| 9 | ♂ | 29 | 16 | 40 | Yes | Yes | Yes | No | 80 | Complete subsidence of diarrhea |
| 10 | ♂ | 45 | 10 | 48 | Yes | Yes | Yes | Yes | 117 | Decided improvement |
| 11 | ♂ | 24 | 8 | 38 | Yes | No | Yes | No | ... | Decided improvement |
| 12 | ♂ | 66 | 7 | 10 | Yes | Yes | Yes | No | ... | Decided improvement |
| 13 | ♂ | 35 | 5 | 80 | Yes | Yes | No | Yes | 249 | Moderate improvement |
| 14 | ♂ | 42 | 15 | 66 | Yes | Yes | Yes | No | ... | Moderate improvement |
| 15 | ♂ | 79 | 7 | 24 | Yes | Yes | Yes | No | 53 | No response; only five injections given |
| 16 | ♂ | 53 | 8 | 30 | Yes | Yes | Yes | Yes | ... | Not given |
| 17 | ♀ | 24 | 18 | 50 | Yes | Yes | Yes | Yes | ... | Not given |
| 18 | ♀ | 62 | 12 | 46 | Yes | Yes | Yes | Yes | 89 | Slight improvement |
| 19 | ♂ | 51 | 20 | 24 | Yes | Yes | Yes | Yes | ... | Moderate improvement |
| 20 | ♂ | 32 | 7 | 37 | Yes | Yes | Yes | Yes | 82 | Decided improvement |
| 21 | ♀ | 50 | 11 | 32 | Yes | Yes | Yes | No | ... | Decided improvement |
| 22 | ♀ | 20 | 5 | 64 | Yes | Yes | Yes | No | 43 | Decided improvement |
| 23 | ♀ | 23 | 8 | 10 | Yes | Yes | No | No | ... | Not given |
| 24 | ♂ | 31 | 18 | 44 | Yes | .... | .... | No | ... | Decided improvement |
| 25 | ♀ | 54 | 14 | 46 | Yes | Yes | Yes | Yes | ... | Not given |
| 26 | ♀ | 32 | 9 | 36 | Yes | No | No | Yes | 69 | Decided improvement |
| 27 | ♂ | 27 | 4 | 40 | Yes | Yes | Yes | Yes | ... | Decided improvement |
| 28 | ♂ | 35 | 2 | 48 | Yes | No | .... | Yes | 91 | Decided improvement |
| 29 | ♂ | 35 | 1 | 44 | Yes | Yes | Yes | Yes | 105 | Decided improvement |
| 30 | ♂ | 35 | 6 | 66 | Yes | Yes | Yes | No | ... | Decided improvement |
| 31 | ♂ | 25 | 6 | 50 | Yes | .... | Yes | No | ... | Decided improvement |
| 32 | ♀ | 56 | 7 | 28 | Yes | Yes | Yes | Yes | ... | Not given |
| 33 | ♀ | 71 | 4 | 34 | Yes | No | Yes | No | ... | Not given |
| 34 | ♀ | 27 | 8 | 40 | Yes | Yes | Yes | No | 44 | No response |
| 35 | ♂ | 54 | 6 | 20 | Yes | Yes | Yes | Yes | 112 | Decided improvement |
| 36 | ♀ | 28 | 10 | 40 | Yes | Yes | Yes | Yes | 63 | Decided improvement |
| 37 | ♀ | 44 | 3 | 52 | Yes | Yes | Yes | No | ... | Decided improvement |
| 38 | ♀ | 74 | 18 | 48 | Yes | Yes | Yes | No | ... | Decided improvement |
| 39 | ♂ | 29 | 4 | 65 | Yes | No | Yes | No | 117 | Not given |
| 40 | ♂ | 34 | 7 | 35 | Yes | Yes | .... | Yes | 65 | Not given |

DATA IN FORTY CASES

At the onset of the diarrhea the average age of the patient was 42 years, the ages ranging from 20 to 79 years. The average duration of diabetes was nine years. In this series there were 23 males and 17 females.

LABORATORY STUDIES

*X-Rays.*—Examination of the upper gastrointestinal tract in 17 cases revealed no abnormalities, although pancreatic calculi were found in 1 instance. Examination of the colon by barium enema was negative in 28 cases with the exception of increased spasticity observed in 6 cases. In the 15 cases studied by proctoscopy the mucosa was normal. A rectal examination in 38 cases was negative except for a relaxed anal sphincter in 5 patients.

*Hematology.*—The blood picture was remarkable in that 38 of the 40 patients had normal erythrocyte counts. The remaining 2 patients had red blood cell counts of 3,940,000 and 3,820,000. The hemoglobin content averaged 90.6 per cent. The blood Hinton test was negative in 39 cases and doubtful in 1. The hematology indicates that pernicious anemia and syphilis are not factors in the etiology of this condition.

*Ocular Fundi.*—Ophthalmologic examination in 33 cases revealed the presence of diabetic retinitis in 11, or one third of the total examined. In 1 case the retina could not be seen because of cataracts.

TREATMENT

Various therapeutic measures, including vitamins, chemotherapy (succinylsulfathiazole and sulfaguanidine), hydrochloric acid and drugs exerting a costive

3. Bowen, B. D., and Aaron, A. H.: Gastric Secretion in Diabetes Mellitus, Arch. Int. Med. **37**: 674 (May) 1926.
4. Root, H. F.: Diabetes and Pernicious Anemia, J. A. M. A. **96**: 928 (March 21) 1931.

effect have proved of little or no value. A low residue, nonirritating diet is always prescribed but alone is not effective. It was found, however, that crude liver extract given parenterally was of definite value in controlling the diarrhea in 26 of the 28 cases in which it was used. Some patients discontinued this treatment a short time after returning home and a recurrence of the diarrhea followed, but when the liver extract was resumed the diarrhea again subsided. Although the tendency to spontaneous remission must be remembered in evaluating any treatment in this disorder, the response to liver extract is prompt and striking in most cases. The necessity of continuous liver extract treatment cannot be overemphasized. Two to four cc. of crude liver extract given intramuscularly daily for four to six days has proved effective and should be followed by weekly injections.

### COMMENT

This syndrome of nocturnal diarrhea seems to be a specific complication of diabetes mellitus and as far as we can determine has not been reported in nondiabetic patients.

Previous poor diabetic control, as evidenced by hyperglycemia and glycosuria, was outstanding in each of the 40 cases and may act as an important etiologic factor.

Diabetic neuritis preceded the onset of the diarrhea in 58 per cent of the 40 cases reported, which suggested the possibility that the diarrhea syndrome may be a manifestation of diabetic neuropathy. Further, in 2 of these cases, in which eventually the neuritis was cured, the diabetic diarrhea completely disappeared. If this is the case one might suspect a disturbance of sympathetic innervation, since it has been shown [5] that these nerves exert an inhibiting action to the entire colon. Learmonth and Markowitz [6] have sectioned the colonic (sympathetic) nerve to the colon in dogs and demonstrated increased colonic activity. Rundles [7] recently pointed out that patients with diabetic neuropathy may develop unusual degrees of peripheral sympathetic nerve damage as revealed by sweating deficiencies, loss of vasomotor and pilomotor control, dependent edema and certain types of skin alterations. He further stresses the sympathetic nerve dysfunction in his report of orthostatic hypotension and orthostatic tachycardia in 5 patients with diabetic neuropathy. Rudy and Epstein [8] also have emphasized that diabetic neuritis is not limited exclusively to the peripheral nerves but involves the entire nervous system including the central, peripheral and autonomic parts, with an especial predilection for the peripheral nerves.

### CONCLUSION

1. Nocturnal intermittent diarrhea is a distinct syndrome which may occur in patients with diabetes mellitus.

2. Evidence suggests that this condition may be a manifestation of diabetic neuropathy.

3. Crude liver extract parenterally offers the most effective symptomatic treatment.

81 Bay State Road.

5. Rabinowitch, I. M.; Fowler, A. F., and Watson, B. A.: Gastric Acidity in Diabetes Mellitus, Arch. Int. Med. **47**: 384 (March) 1931.
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# Clinical Notes, Suggestions and New Instruments

## GENERALIZED SUBCUTANEOUS EMPHYSEMA FOLLOWING RESECTION OF LARGE BOWEL

LOWELL BROWN, M.D., and J. WILLIAM HINTON, M.D.
New York

While generalized subcutaneous emphysema is not an infrequent clinical finding, it is an unusual occurrence following surgical operation on the large bowel. Only 2 similar cases have been reported in the literature.

### REPORT OF CASE

S. A., a white man aged 47, entered the New York Post-Graduate Hospital Aug. 29, 1945 with a history of malaise, weight loss and increasing constipation of eight months' duration. Two attacks of crampy upper abdominal pain and distention led him to seek medical advice.

The patient was well developed, stocky and slightly obese. Except for slight pallor of the skin and mucous membrane and the presence of moderate tenderness in both upper quadrants of the abdomen, physical examination was negative. A barium colon enema showed an annular defect in the upper part of the descending colon.

Laboratory work-up revealed the red blood count to be 4.39 million with 11.3 Gm. of hemoglobin. The white blood cell count, urinalysis, blood chemistry and electrocardiogram were within normal limits. The erythrocyte sedimentation rate was 51 mm. in one hour.

The patient was prepared for resection with catharsis, colonic irrigations, whole blood transfusions, intravenous amigen and the administration of succinylsulfathiazole. After one week operation was performed. The abdomen was entered through a left rectus muscle splitting incision. One inch distal to the splenic flexure a large annular growth was encountered which was causing nearly complete obstruction. No metastases to liver or regional nodes were evident. The growth, together with a good portion of uninvolved bowel and a wedge of mesocolon, was resected and an aseptic end to end anastomosis performed using the Furniss clamp. Three layers of interrupted cotton sutures were used in making the anastomosis. Five Gm. of sulfanilamide powder was placed without drainage in the abdomen and the abdomen closed in anatomic layers with interrupted number 4 cotton for peritoneum, fascia and skin. The operation was made technically difficult by the patient's stocky, obese habitus, and complete reperitonealization of the left lumbar gutter was not possible.

The operative procedure was well tolerated, but beginning with the second postoperative day the course was stormy, with daily elevations of temperature to 103-104 F. and considerable abdominal pain and distention. On the third postoperative day the patient passed a number of loose stools and considerable flatus. Coupled with these signs of peritonitis he developed evidence of pulmonary consolidation, and full doses of intravenous sodium sulfadiazine and intramuscular penicillin were started, without, however, any noticeable change in the clinical picture.

On the evening of the eleventh postoperative day a grapefruit sized tumefaction suddenly appeared in the left pectoral region which palpation revealed to be a subcutaneous collection of gas. This was limited above by the clavicle, below by the costal margin, medially by the sternum and laterally by the anterior axillary line. The chest had been examined about an hour before, so that it was known definitely that there had been no change in auscultatory or percussion findings. The trachea was in the midline and there was no crepitus of face, neck or arms. The abdomen, however, was still distended and there was crepitus in the left flank just above the anterior superior spine. Nowhere was there any evidence of inflammation in the skin or subcutaneous tissues. Examination of the wound revealed that it was entirely normal. Within a few hours the emphysema had spread to the neck, face, arms and even down to the hands, giving the patient a grotesque Buddha-like appearance.

During the ensuing week his condition became progressively worse and he was irrational at times. On the eighteenth postoperative day the left flank, which for a day or so had seemed slightly inflamed, was noted to be red and indurated. Under pentothal sodium anesthesia, a 6 inch incision down to the transversalis fascia was made and packed wide open. No pus was encountered.

The following day, the distention still being considerable, paracentesis was carried out. When the peritoneum was entered in the epigastric region there was a sudden escape of much fecal smelling gas, with immediate collapse of the entire distended abdomen. Several ounces of thin tan colored fluid also was aspirated. A rubber catheter was inserted for continuous deflation, and 50,000 units of penicillin was instilled every two hours. Therapy with a specific bacteriophage was begun intravenously.

Two days later a fecal fistula developed in the midportion of the operative incision, and at the same time feces was obtained from the drainage tube in the epigastrium, which now communicated directly to the former. From this time on the patient's condition improved and by the twenty-fourth postoperative day he was passing flatus and small amounts of feces by rectum, and while his abdomen showed only moderate distention his facial emphysema had almost disappeared. He was able to leave the hospital on the seventy-fifth postoperative day. At present, six weeks following discharge, there is no drainage and his wound is nearly completely healed.

X-ray studies with contrast mediums prior to his discharge revealed multiple sinus tracts extending from the left iliac area to the epigastrium. Culture of the aspirated abdominal fluid showed nonhemolytic streptococci and Bacillus coli communior. Pathologic examination of the operative specimen revealed the tumor to be a papillary cystadenocarcinoma of the colon. The few lymph nodes in the specimen contained no tumor.

### COMMENT

The most common origin of subcutaneous emphysema is known to be the chest and respiratory passages, where it may occur secondary to a lung injury or secondary to pneumothorax spontaneously or artificially produced. It may occur following tracheotomy and even occasionally following operation on the nasopharynx.

Less frequently subcutaneous emphysema originates within the abdomen. Here it may follow traumatic rupture of the hollow viscera or more rarely may occur secondary to spontaneous perforations. Several instances of subcutaneous emphysema accompanying perforated peptic ulcers have been collected by McCorkle and Stevenson,[1] who present an illustrative case together with a review of the literature. The manner in which gas reaches the subcutaneous tissues despite an intact peritoneum is discussed. Similarly a case of subcutaneous emphysema of the scrotum resulting from the perforation of a sigmoid diverticulum is reported by Rankin and Judd.[2]

Gas may also occur in the peritoneal cavity as the result of infection by gas producing organisms. The best example is found in cases of appendical abscess due to a gas forming colon bacillus. Review of the literature, however, revealed only 1 reported instance of subcutaneous emphysema in such a case.[3] This paper unfortunately is not available to us.

Subcutaneous emphysema also occurs, of course, in connection with infection of the subcutaneous tissues by any of the gas forming organisms.

Two cases similar to that being presented have been found in the literature. Baumecker[4] performed a side to side anastomosis between the ascending and the descending colon for inoperable carcinoma of the transverse colon. On the second postoperative day the patient developed emphysema of the abdominal wall, which subsequently spread upward into the neck and down as far as the thighs. On the fifth day postoperatively a fecal (?) fistula appeared, which closed spontaneously nine days later. There was never any elevation in temperature, and Baumecker concludes that the gas originated in a leakage of the anastomosis.

Von Hasselbach[4] records a case of subcutaneous emphysema arising after the performance of a colostomy. There was no evidence of infection, and he believes the gas originated directly from a perforation of the bowel by the needle in suturing.

Baumecker mentions another case in which slight subcutaneous emphysema occurred following laparotomy, due, he feels, to the postoperative leakage from the peritoneal cavity of air admitted at operation. Such leakage could occur, as he suggests, if intra-abdominal pressure was increased by straining or distention, especially if closure had been insecure. We have seen 1 such case in which crepitus was discovered in an apparently clean wound (cultures were negative) on the seventh postoperative day. A sudden temperature rise of obscure cause had occurred which was found at postmortem to be due to a fulminating hepatitis.

In the case herein reported there was obviously a leakage of the anastomosis. Whether the gas was produced by a gas forming colon bacillus in the course of a peritonitis caused by this organism, whether it came directly from the bowel lumen or whether both mechanisms played a part is not clear. We feel that the former explanation most nearly accounts for the clinical findings. The subsequent spread of gas was obviously made possible by the peritoneal defect left at operation.

130 East Seventy-Ninth Street.

1. McCorkle, H., and Stevenson, J.: Subcutaneous Emphysema Associated with Perforated Peptic Ulcer, Surgery **2**: 930-936 (Dec.) 1937.
2. Rankin, Fred W., and Judd, E. Starr: Emphysema of the Scrotum the Result of Diverticulitis of the Sigmoid with Perforation, Surg., Gynec. & Obst. **35**: 310-312 (Sept.) 1922.
3. Gruca, A.: Occurrence of Gas Edema of Abdominal Wall as Symptom of Acute Phlegmonous Appendicitis, Polska gaz. lék. **12**: 231-232 (March 19) 1933.
4. Baumecker, H.: Subcutaneous Emphysema Due to Gases from Large Intestine Following Surgery, Zentralbl. f. Chir. **68**: 1741-1742 (Sept. 13) 1941 (comment on von Hasselbach's article).

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## VISUALIZATION OF OTITIC BRAIN ABSCESS WITH IODIZED OIL

EDWIN J. BLONDER, M.D.
Chicago

Delineation of an otogenic brain abscess by iodized oil is useful in determining the size and shape of the abscess; repeated use would prove an excellent guide to the progress of such an abscess under management.

Review of the effect of lipiodol on brain tissue[1] following lumbar myelography indicated that symptoms or findings the patient may have subsequently could not be related to the retention of the iodized oil in the brain. Evans[2] in 1944 reported the use of 2 cc. of iodized poppy seed oil in a right frontal lobe abscess instilled through a trephine opening. The roentgenogram revealed that the abscess had ruptured to the ventricle. His patient recovered under penicillin. Kahn[3] filled a chronic temporosphenoidal abscess cavity through a trephine with thorium dioxide and obtained a roentgenogram with good filling. Thorium dioxide particles are phagocytosed by cellular elements of the capsule, so that increase in the size of the abscess is indicated in the roentgenogram. Iodized oil on the contrary is not absorbed by the tissue, and in my patient the lipiodol was evacuated within one week, as indicated by the roentgenogram. Kopetzky and Almour[4] used lipiodol to follow fistulas in the petrous bone and in some instances spills were revealed in the cranial cavity. I have been unable to find any reports of an otitic brain abscess filled with an iodized oil through a mastoidectomy.

My patient had a chronic temporosphenoidal abscess that was uncovered following a radical mastoidectomy. One week after

From the Illinois Eye and Ear Infirmary, University of Illinois, and the Department of Nervous Diseases, Northwestern University Medical School.

1. Garland, L. H., and Morrissey, E. J.: Intracranial Collections of Iodized Oil Following Lumbar Myelography, Surg., Gynec. & Obst. **70**: 196, 1940. Intracranial Collections of Iodized Oil Following Lumbar Myelography, editorial, Am. J. Roentgenol. **43**: 749, 1940.
2. Evans, A. L.: The Treatment of Intracranial Infections with Penicillin, J. A. M. A. **124**: 641 (March 4) 1944.
3. Kahn, E. A.: Treatment of Encapsulated Brain Abscess: Visualization By Colloidal Thorium Dioxide, Arch. Neurol. & Psychiat. **41**: 158 (Jan.) 1939.
4. Kopetzky, S. J., and Almour, R.: Report on 10 Cases of Suppuration in Petrosal Pyramid, Ann. Otol., Rhin. & Laryng. **44**: 59, 1935.

the operation, about 15 cc. of undiluted lipiodol was instilled in the abscess cavity. Roentgenograms revealed a beautiful filling of the abscess cavity, as can be noted in the reproductions. The lipiodol was evacuated within one week through a large rubber drain, as indicated by subsequent roentgenograms. The patient was discharged from the hospital forty-four days after the operation and was found in good condition on a recent examination.

### REPORT OF CASE

A man aged 37 entered the Illinois Eye and Ear Infirmary on June 6, 1943 with a history of bilateral suppurative otitis media since childhood. Shouted voice could not be heard at either concha. A right peripheral facial paralysis had been present for five years. No surgery had ever been performed on either ear. The patient consulted us because of a very severe right temporal pain which was not relieved by medication.

The right ear canal was dry; the drum was almost entirely destroyed, and the middle ear was filled with scar tissue and moist granulations. The left canal was moist, and the drum and middle ear were similar to the right. Spoken voice was not heard in either ear. General physical and neurologic examinations were negative except for the right peripheral facial paralysis. The ophthalmologic service reported normal fundi and visual fields. A normal caloric response was obtained with irrigation of both ears with 50 per cent alcohol at 68 F. No spontaneous nystagmus or past pointing was present. The temperature was 98 F., pulse rate 88, respiratory rate 20. The blood count revealed 3,550,000 red cells, 9,900 white cells, polymorphonuclears 72 per cent, lymphocytes 22 per cent, monocytes 1 per cent, eosinophils 2 per cent, hemoglobin 71 per cent. The blood and spinal Wassermann reactions were negative. The roentgenologist reported bony sclerosis of both mastoids, with some absorption on the left, the side opposite the pain.

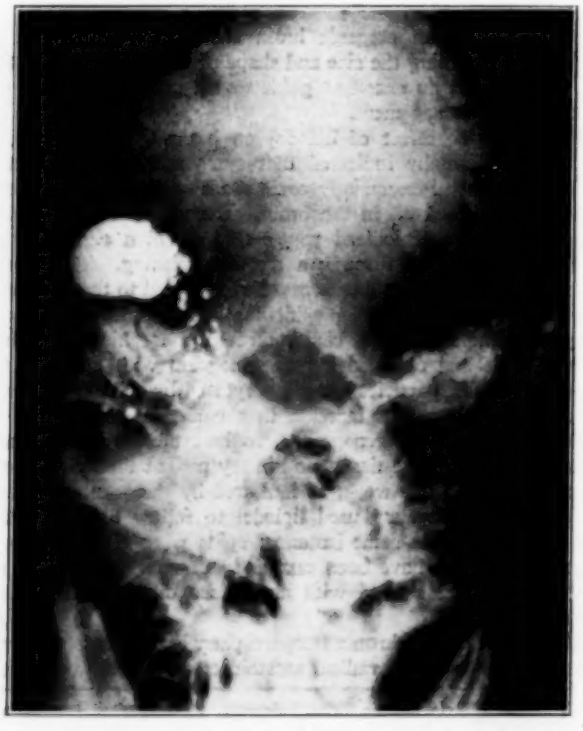


Fig. 1.—Anteroposterior view of otitic brain abscess filled with iodized oil. Patient on back, and tube tilted 35 degrees toward feet.

Because of the right facial paralysis and the severe right temporal pain in addition to the chronic ear suppuration, a right radical mastoidectomy was performed, followed by opening of the temperosphenoidal abscess through the roof of the attic. The mastoid was sclerotic except for the periantral region and the fistula to the abscess. The attic was cleared of granulations, and the fistula followed to the middle fossa. A sudden gush of brown liquefied pus indicated that the abscess had been reached. Gauze packed in the abscess opening slowed the evacuation of pus to reduce the danger of secondary edema of the brain tissue. A second pack was placed in the mastoid cavity. The wound was permitted to remain open.

Fig. 2.—Lateral view of otitic brain abscess filled with iodized oil. Note the sharp outline.

Sulfonamide therapy was instituted. The contents of the brain abscess were sterile on culture.

The abscess was again entered one week later with the patient under a hypnotic. Temperature was 100 F. Both packs were removed. A flexible probe indicated that the abscess cavity was large and had a firm capsule. About 15 cc. of undiluted lipiodol was instilled in the abscess cavity by means of a glass syringe and a silver eustachian catheter. No pressure was used. This procedure was performed on a cart in the operating room. The patient was wheeled immediately to the x-ray room for films. The results were beautiful, showing the abscess cavity well filled. A large soft rubber tube was inserted in the abscess cavity after the films were taken. Many subsequent films were taken to indicate the progress. The roentgenogram demonstrated that the lipiodol was completely evacuated in one week.

The patient's temperature returned to normal five days after the lipiodol instillation. Rubber drains were changed about every six days. Forty-four days after the operation the patient was discharged from the hospital and has been observed at frequent intervals since. He is a good lip reader and works at pressing clothes.

On March 1, 1945 a complete examination revealed the patient to be in excellent physical condition. The ears were dry. No headaches had been present since his discharge from the infirmary. The otoneurologic examination revealed no evidence of a temporosphenoidal abscess. This was confirmed by additional examinations by our neurologist, our ophthalmologic service and a series of roentgenograms.

### CONCLUSIONS

1. Iodized oil is useful in outlining an established brain abscess.

2. The iodized oil may be of some therapeutic value in the management of an otogenic brain abscess.

3. The use of lipiodol is a safe procedure to use in an established otogenic temporosphenoidal abscess.

25 East Washington Street.

# Council on Physical Medicine

*The Council on Physical Medicine has authorized publication of the following reports.* HOWARD A. CARTER, *Secretary.*

## HOLMSPRAY ATOMIZER AND NEBULIZER ACCEPTABLE

Manufacturer: T. J. Holmes Co., Inc., Chartley, Mass.

The Holmspray Atomizer No. 605 is a device for applying medicaments to the nose and throat. It is an all glass atomizer adapted for spraying oils, aqueous solutions and alcoholic solutions, especially designed for disseminating compounds which affect metals or are affected by contact with metals. The device is equipped with a rubber bulb to create pressure and gives a direct, relatively heavy spray.

Holmspray Atomizer No. 605.

The Holmspray Nebulizer No. 630 is different from the Holmspray Atomizer in that it produces a finely disseminated, almost invisible vapor designed to reach more distant parts of the respiratory tract. Like the Atomizer, it is all glass and is designed for compounds which affect metals or are affected by contact with metals. It is equipped with a rubber bulb.

Holmspray Nebulizer No. 630.

The Council on Physical Medicine voted to accept the Holmspray Atomizer No. 605 and the Holmspray Nebulizer No. 630 for inclusion in its list of accepted devices.

## BELTONE MONO-PAC HEARING AID ACCEPTABLE

Manufacturer: Beltone Hearing Aid Company, 1450 W. 19th Street, Chicago 8.

The Beltone Mono-Pac Hearing Aid is a three tube instrument with transmitter, amplifier and batteries in one case. A single cord connected to an air conduction receiver is attached to the case.

Physical Dimensions:

Case: 5½ by 2 9/16 by 1⅛ inches.

Receiver: Either 1 inch diameter or ¾ inch diameter air conduction crystal (Brush).

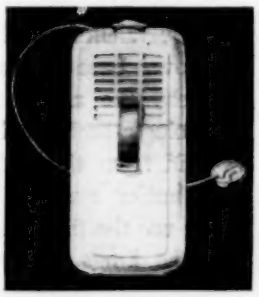
Weight:

Case (containing batteries, transmitter and amplifier): 11¼ ounces.

Current consumption:

A battery (1½ volts), 60 milliamperes.

B battery (30 volts), 0.68 milliampere.



Beltone Mono-Pac.

Current drain is independent of volume control setting.

Acoustical gain for pure tones:

| | 250 | 500 | 1,000 | 2,000 | 3,000 | 4,000 | 5,000 F |
|---|---|---|---|---|---|---|---|
| Maximum gain, high tone..... | 26.5 | 37.0 | 49.0 | 55.0 | 51.0 | 37.5 | 22.0 decibels |
| Maximum gain, medium tone.. | 32.0 | 39.5 | 51.5 | 54.0 | 51.0 | 36.5 | 21.0 decibels |
| Maximum gain, low tone..... | 29.0 | 35.0 | 39.5 | 49.0 | 41.5 | 25.5 | 8.0 decibels |

These values were obtained with the large size crystal receiver (1 inch diameter). The measurements were obtained with an artificial ear. The instrument was mounted on a body baffle. These values do not represent absolute sound pressure values but indicate the amplification efficiency of the hearing aid at the different frequency levels shown. These values are accurate to within plus or minus 3 decibels.

Physical and Mechanical Features: The entire instrument, including batteries, is contained in a single case of black plastic material, rectangular with rounded edges. The combined volume control and "off-on" switch consists of a round knob positioned in an inset at the top of the case. The case is somewhat larger and heavier than the conventional tube hearing aid transmitter and amplifier case, since it also contains the batteries. The total weight, however, is less than that of the conventional instrument which has separate cases for transmitter and batteries.

Performance: This instrument operates in an entirely satisfactory manner. There is a minimum of inherent amplifier, case and cord noise.

The Council on Physical Medicine voted to include in its list of accepted devices the Beltone Mono-Pac Vacuum Tube Hearing Aid.

# Council on Pharmacy and Chemistry

## NEW AND NONOFFICIAL REMEDIES

*The following additional articles have been accepted as conforming to the rules of the Council on Pharmacy and Chemistry of the American Medical Association for admission to New and Nonofficial Remedies. A copy of the rules on which the Council bases its action will be sent on application.*

AUSTIN SMITH, M.D., *Secretary.*

**PERCOMORPH LIVER OIL** (See New and Nonofficial Remedies, 1945, p. 637).

The following additional dosage form has been accepted:

MEAD JOHNSON & COMPANY, EVANSVILLE, IND.

**Oleum Percomorphum with Other Fish Liver Oils and Viosterol:** 10 cc. bottles.

**MANNITOL HEXANITRATE** (See New and Nonofficial Remedies, 1945, p. 334).

The following dosage form has been accepted:

E. R. SQUIBB & SONS, NEW YORK

**Tablets Mannitol Hexanitrate:** 16 mg. and 32 mg.

**GOLD SODIUM THIOSULFATE** (See New and Nonofficial Remedies, 1945, p. 175).

The following additional dosage form has been accepted:

MERCK & CO., INC., RAHWAY, N. J.

**Gold Sodium Thiosulfate:** 75 mg. bottles.

**THIAMINE HYDROCHLORIDE** (See New and Nonofficial Remedies, 1945, p. 610).

The following additional dosage form has been accepted:

MEAD JOHNSON & COMPANY, EVANSVILLE, IND.

**Tablets Thiamine Hydrochloride:** 5 mg.

**BACTERIAL VACCINE MADE FROM HEMOPHILUS PERTUSSIS** (See THE JOURNAL, Jan. 5, 1946, p. 31).

The following dosage form has been accepted:

PARKE, DAVIS & CO., DETROIT

**Pertussis Vaccine, Immunizing (Sauer):** 6 cc. and 24 cc. vials. 15,000 million H. Pertussis per cubic centimeter.

**RIBOFLAVIN** (See New and Nonofficial Remedies, 1945, p. 614).

The following additional dosage form has been accepted:

ABBOTT LABORATORIES, NORTH CHICAGO, ILL.

**Tablets Riboflavin:** 10 mg.

**SULFATHIAZOLE SODIUM** (See New and Nonofficial Remedies, 1945, p. 213).

The following dosage form has been accepted:

ABBOTT LABORATORIES, NORTH CHICAGO, ILL.

**Sterile Sodium Sulfathiazole Anhydrous:** 5 Gm. ampuls.

**ASCORBIC ACID** (See New and Nonofficial Remedies, 1945, p. 622).

The following dosage form has been accepted:

MCKESSON & ROBBINS, INC., BRIDGEPORT, CONN.

**Tablets Ascorbic Acid:** 25 mg., 50 mg. and 100 mg.

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SATURDAY, MARCH 9, 1946

## BOMBING AND HEALTH

During the war opinion varied sharply as to whether or not air bombardment could reduce a nation such as Germany to the point of surrender. Many of the British felt continuance by Germany of its aerial bombardment of September 1940 for a few days longer would have forced Britain to give up. Germany received during the five years of war at least thirty times the weight of high explosives that the Luftwaffe was able to hurl on Britain, and yet surrender came only after formidable land-borne attacks of the United Nations' armored columns.

What effect, then, did air warfare have on the German people? One of the most revealing of all investigations made following V-E day was that of the U. S. Strategic Bombing Survey, which issued (and very promptly) a model report.[1] A team of American scientists, many of them physicians, followed the advancing Allied armies during the closing days of the war, assembling data from health authorities and viewing conditions before the dust of war was settled or the rubble cleared. Most striking was the fact that the health of the German people was not broken even though nearly half of their hospitals and other medical facilities had been destroyed. The state of affairs in the larger cities was hideous, and the most seasoned of the Wehrmacht troops insisted that they would prefer duty on an active battle front to exposure to heavy air bombardment of an industrial area.

The Survey estimates that about 500,000 people were killed during Allied air attacks, and probably four times that number were wounded. In Hamburg during a single month (July 1943) more than 50,000 people were killed, which is considerably more than twice the number of fatalities sustained in the London area throughout the whole war period. The incendiary raids were feared more than those of high explosives, and the cause of death in such raids was generally not burns but rather suffocation. It was estimated at Hamburg that the temperature in a burning block of dwelling houses rose to 1,500 degrees Fahrenheit. In these circumstances air raid shelters became living furnaces, and the frightened occupants frequently emerged naked only to find that they were enveloped on all sides by an even greater heat that quickly suffocated.

A number of disease entities rose sharply during the war period, particularly peptic ulcer, and coronary disease in the younger age groups. Psychiatric breaks were much less frequent than might have been anticipated, perhaps on account of the psychologic stability induced by propaganda. The German birth rate, which was on the increase up to 1939, fell progressively during the war years. Oddly enough, death from cerebral hemorrhage and diabetes decreased during the war years.

Repeated disruption of communications finally had its effect. In April 1945 Professor Karl Brandt, Reich Commissar for Military and Civilian Medicine and Health, informed Hitler that 20 per cent of all essential medical supplies had been destroyed, that 40 per cent of those in stock would not last two months and that the remainder could maintain the country for only four additional months. For his analysis of the situation Brandt was promptly put to death, Der Fuehrer regarding him as defeatist.

1. Enloe, Cortez F., ed.: The Effect of Bombing on Health and Medical Care in Germany, Morale Division, U. S. Strategic Bombing Survey, War Dept., Washington, 1945.

## URINARY ACID

The body is inherently an acid producing organism. The chemical reaction from which the major portion of metabolic energy is derived, namely the oxidation of carbon, yields a potentially acid product, carbon dioxide. In addition, lactic, beta hydroxybutyric and acetoacetic acids are common side products of metabolism. Furthermore, certain foods, notably proteins and cereals, contribute to the acid produced in bodily economy; in this connection it has been estimated that from 30 to 80 milliequivalents is the magnitude of the excess of acid over base in our daily dietary. The mechanism whereby the acid-base balance is maintained within physiologic limits and the devices for ultimate removal of acid from the body have received much attention. The buffer systems in the blood and extravascular fluids are the first line of defense against a decrease in $p_H$; the lungs, kidney and skin are involved in the final elimination of acid from the organism. The urine is ordinarily considerably more acid than is the blood; one of the prime functions of the kidney is to excrete acid without the loss of equivalent amounts of base. This organ forms ammonia and substitutes it for base, in combination with the metabolic acids, returning the base to the blood. Also in the distal tubule changes in the phosphates occur which likewise tend to conserve base while metabolic acid is being removed in the urine.

A recent report[1] describes experiments designed to shed further light on the mechanism whereby the urine attains its final acidity in the distal renal tubule. Acido-

1. Pitts, R. F., and Alexander, R. S.: Am. J. Physiol. 144: 239 (July) 1945.

sis was induced in unanesthetized suitably trained laboratory animals, and by the use of data from concomitant blood and urine analyses the glomerular filtration rate was calculated and the total acidity of the urine determined. Under these conditions it was observed that the titratable acidity of the urine was greater than could be accounted for by the change in phosphates with reabsorption of the more alkaline form or by the action of carbonic acid on the phosphate with the reabsorption of bicarbonate. Indeed these two mechanisms accounted for only one fourth to one third of the total acid excreted. The Cornell investigators believe that the observed facts can be explained by a mechanism in which the renal tubular cells take an active part in ion exchange: the transfer of hydrogen ions from the peritubular blood to the urine in the lumen in the tubule and the return of sodium ions from the urine to the blood in the form of bicarbonate. The factor within the cell responsible for catalyzing part of this transfer is probably carbonic anhydrase; this enzyme combines carbon dioxide from the cell metabolism and from the postglomerular blood with water to form carbonic acid, which in turn provides the hydrogen ions for the exchange.

The foregoing suggestions regarding the origin of the acidity of the urine are supported by convincing experimental evidence. A thorough understanding of all aspects of acid-base equilibrium and the factors and mechanisms involved is so important in modern medicine that further corroboration of these carefully considered views will be awaited with interest.

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## NATIONAL SCIENCE FOUNDATION

Two Senate subcommittees have joined in concurrent reports urging the establishment of a National Science Foundation and reporting on the new National Science bill, S. 1850, which has been perfected jointly by the two subcommittees. The perfected bill is the product of many hearings and conferences between scientists and the members of the subcommittees. The American Medical Association has already announced its support of the general purposes of this legislation, which is designed to permit continuation in the postwar period of the coordinated and intensified research that yielded such magnificent results during the war. The report emphasizes particularly the desirability of extending research in the basic sciences and of overcoming the deficit of competent young investigators in the natural sciences and engineering. Some of the wartime scientific developments, such as our increased knowledge of atomic energy and the development of radioactive isotopes of the common elements, should be helpful to chemists and physiologists in studying living tissues and disease.

Specifically, the report indicates that medical research should be aided, particularly in the investigation of heart disease, diseases of the blood vessels, tuberculosis, arthritis, and nervous and mental diseases. Also cited are the common cold and the aging process in man as areas in which research should be intensified. The subcommittee points out that the by-products of other scientific developments made during the war promise to accelerate medical research.

The report suggests that the Bureau of the Budget and the congressional Committees on Appropriations should approve separate budgets for each of the major divisions of the foundations. President Truman recommended $40,000,000 for the first fiscal year of the operation of the foundation in his 1946 budget message. This appropriation will probably be made when the bill passes, since the Office of Scientific Research and Development discontinues its activities in June. To the medical sciences will be allocated not less than 15 per cent of the funds appropriated for research and development activities.

In the revised measure the use of a full time staff and a part time scientific personnel is provided, the full time staff being charged with the actual administrative responsibilities and the part time staff of nongovernment scientists with the planning and evaluating of all programs of the foundation. In its organization the National Science Foundation is directed by an administrator who consults and advises with a National Science Board on all matters of major policy, program and budget. The board consists of nine members appointed by the President by and with the advice of the Senate from among persons who are especially qualified, plus the individual chairmen of the several divisional scientific committees. Each such scientific committee, as for instance the committee in the division of medical sciences, consists of not less than five and not more than fifteen members who are appointed by the administrator with the advice and approval of the board. These divisional scientific committees elect their own chairmen once they are established.

Among other divisions of the foundation is a division of publication and information to promote the widespread dissemination and utilization of scientific findings. Through this division the foundation is authorized to provide for complete publication together with financial and other assistance to nongovernment scientific journals, to provide aid in the work of translating and abstracting scientific publications and to aid other activities which will make scientific literature more readily accessible to working scientists and other users of scientific information.

The measure provides for the permanence of the National Roster of Scientific and Specialized Personnel. It recognizes the rights of private organizations to such research as they themselves finance. It provides also for strengthening international cooperation by assisting American scientists to participate in international scientific conferences and in the development of specific science projects.

# Current Comment

## SPECIFICITY OF THE KAHN REACTION

In a recent report McDermott [1] stated that the Kahn standard test has shown a consistent record of 100 per cent specificity in eleven consecutive evaluation studies on tests for syphilis conducted by the U. S. Public Health Service from 1937 to 1945. In these evaluation studies portions of the same "unknown" specimens of blood were submitted to different laboratories for serologic examination. The eleven evaluation studies included the examination of approximately 1,000 cases of tuberculosis, febrile diseases, cancer and other diseases, excluding malaria and leprosy, and slightly more than 1,000 normal persons, making a total of 2,022 cases. These results of the Kahn test should not be interpreted to mean that the test is 100 per cent specific under all conditions. Kahn's interest in perfecting a verification test for the detection of false positive reactions [2] is ample evidence that his test may also give such reactions. Thus watchfulness is needed to detect false reactions in all seropositive cases in which no clinical or epidemiologic evidence points to syphilis.

## DR. MARTHA M. ELIOT—PROPAGANDIST FOR THE CHILDREN'S BUREAU

From the Children's Bureau of the United States Department of Labor comes a newspaper release quoting Dr. Martha M. Eliot as urging a nationwide maternal and child health program because it will offer thousands of opportunities for professionally trained men and women. Of course it will also permit a tremendous expansion of the functions of the Children's Bureau and take away from fathers and mothers the personal responsibility and contacts with their own children that are significant in the American system of living. According to the release, Dr. Eliot said "We have come to accept the fact that the health of the nation's children is as much a public responsibility as their education." To support her propaganda Dr. Eliot cited some figures which are susceptible of misinterpretation; possibly these figures were cited in this manner so that they would be misinterpreted. "In one out of six counties," says Dr. Eliot, "there is only one doctor to 3,000 or more people. Under a good standard there would be one doctor available for every 750 people. In eighty-one counties there is no practicing physician." Dr. Eliot could have added that we had one doctor for every 750 people in the United States before the war but that the voluntary offering of their services by 60,000 physicians to the armed services changed the ratio. Since the United States is the only country in the world that ever had as many as one doctor to every 750 people one wonders on what basis her calculation of a good standard was reached. Dr. Eliot also estimates that we need 48,000 additional public health nurses to advise mothers in their homes about how to care for themselves and their children. She is much disturbed because three out of four counties have no regular monthly maternity clinic where mothers can learn how to prepare for safe childbearing. We were under the impression that the doctor who accepts the responsibility for giving obstetric care to a prospective mother is the proper person to inform her as to how to prepare for safe childbearing. Apparently the Children's Bureau feels that mothers should henceforth obtain this advice from regular monthly maternity clinics. Among the greatest menaces to the American democracy is the technic whereby the bureaucracies in Washington spend a considerable portion of their time and their funds in urging on the American people expansion of the funds and personnel allotted to those bureaucracies.

## HOSPITAL PHARMACY

In the modern hospital pharmacy has an important place. Recently Shoemaker, in a discussion of the role of pharmacy in the modern hospital (The Role of Pharmacy in the Modern Hospital, William G. Shoemaker, American Professional Pharmacist, Vol. X, November 1944) emphasized the relationship between the physician and the pharmacist under close association in hospital life. After discussing principles, factors influencing the operation of the pharmacy, its purpose and its relation to the use of drugs, the pharmacy committee, records, files and the business office, he concludes that the advantages of a well supervised pharmacy "are greatly appreciated by those who benefit from and come in contact with the problems of medicine." He urges closer cooperation between the physician and the pharmacist in supplying quality drugs and making use of the newer therapeutic measures. The most progressive hospital pharmacies include proper organization and thorough understanding of the part which the pharmacy plays in hospital life. Hospital boards need to modernize and equip the hospital pharmacy properly. Such improvements yield economic and social benefits.

## NEW JOURNAL ON BLOOD

A new bimonthly publication, *Blood*—The Journal of Hematology, has just appeared. The selection of William Dameshek as editor in chief, of George R. Minot as consulting editor and of a staff of associates and assistant editors composed of the representative hematologists of this country augurs well for its future. The first issue contains, among others, a contribution by Edwin J. Cohn on the composition, function and clinical uses of blood, a contribution by Charles A. Doan and Claude-Starr Wright on primary congenital and secondary acquired splenic panhematopenia and one by George R. Minot and his associates on differentiation of pernicious anemia and certain other macrocytic anemias by the distribution of red blood cell diameters. An American journal devoted exclusively to the problems of the diseases of the blood is sure to be received with enthusiasm.

1. McDermott, Elizabeth B.: The Specificity of the Kahn Reaction in Eleven Consecutive Evaluation Studies on Tests for Syphilis, Univ. Hosp. Bull., Ann Arbor **11**: 90 (Nov.) 1945.

2. Kahn, R. L.: A Serologic Verification Test in the Diagnosis of Latent Syphilis, Arch. Dermat. & Syph. **41**: 817 (May) 1940; Technic of the Standard Kahn Test and of Special Kahn Procedures, Ann Arbor, Mich., University of Michigan Press, 1944, p. 31.

# NATIONAL HEALTH PROGRAM OF THE AMERICAN MEDICAL ASSOCIATION

## Adopted by the Board of Trustees and the Council on Medical Service, Feb. 14, 1946

1. The American Medical Association urges a MINIMUM STANDARD OF NUTRITION, HOUSING, CLOTHING AND RECREATION as fundamental to good health and as an objective to be achieved in any suitable health program. The responsibility for attainment of this standard should be placed as far as possible on the individual, but the application of community effort, compatible with the maintenance of free enterprise, should be encouraged with governmental aid where needed.

2. The provision of PREVENTIVE MEDICAL SERVICES through professionally competent health departments with sufficient staff and equipment to meet community needs is recognized as essential in a health program. The principle of federal aid through provision of funds or personnel is recognized with the understanding that local areas shall control their own agencies as has been established in the field of education. Health departments should not assume the care of the sick as a function, since administration of medical care under such auspices tends to a deterioration in the quality of the service rendered. Medical care to those unable to provide for themselves is best administered by local and private agencies with the aid of public funds when needed. This program for national health should include the administration of MEDICAL CARE, INCLUDING HOSPITALIZATION TO ALL THOSE NEEDING IT BUT UNABLE TO PAY, such medical care to be provided preferably by a physician of the patient's choice with funds provided by local agencies with the assistance of federal funds when necessary.

3. The procedures established by modern medicine for advice to the prospective mother and for ADEQUATE CARE IN CHILDBIRTH should be made available to all at a price that they can afford to pay. When local funds are lacking for the care of those unable to pay, federal aid should be supplied with the funds administered through local or state agencies.

4. The child should have throughout infancy PROPER ATTENTION, INCLUDING SCIENTIFIC NUTRITION, IMMUNIZATION AGAINST PREVENTABLE DISEASE AND OTHER SERVICES INCLUDED IN INFANT WELFARE. Such services are best supplied by personal contact between the mother and the individual physician but may be provided through child care and infant welfare stations administered under local auspices with support by tax funds whenever the need can be shown.

5. The provision of HEALTH AND DIAGNOSTIC CENTERS AND HOSPITALS necessary to community needs is an essential of good medical care. Such facilities are preferably supplied by local agencies, including the community, church and trade agencies which have been responsible for the fine development of facilities for medical care in most American communities up to this time. Where such facilities are unavailable and cannot be supplied through local or state agencies, the federal government may aid, preferably under a plan which requires that the need be shown and that the community prove its ability to maintain such institutions once they are established (Hill-Burton bill).

6. A program for medical care within the American system of individual initiative and freedom of enterprise includes the establishment of VOLUNTARY NONPROFIT PREPAYMENT PLANS FOR THE COSTS OF HOSPITALIZATION (such as the Blue Cross plans) and VOLUNTARY NONPROFIT PREPAYMENT PLANS FOR MEDICAL CARE (such as those developed by many state and county medical societies). The principles of such insurance contracts should be acceptable to the Council on Medical Service of the American Medical Association and to the authoritative bodies of state medical associations. The evolution of voluntary prepayment insurance against the costs of sickness admits also the utilization of private sickness insurance plans which comply with state regulatory statutes and meet the standards of the Council on Medical Service of the American Medical Association.

7. A program for national health should include the administration of MEDICAL CARE, INCLUDING HOSPITALIZATION, TO ALL VETERANS, such medical care to be provided preferably by a physician of the veteran's choice, with payment by the Veterans Administration through a plan mutually agreed on between the state medical association and the Veterans Administration.

8. RESEARCH FOR THE ADVANCEMENT OF MEDICAL SCIENCE is fundamental in any national health program. The inclusion of medical research in a National Science Foundation, such as proposed in pending federal legislation, is endorsed.

9. The services rendered by VOLUNTEER PHILANTHROPIC HEALTH AGENCIES such as the American Cancer Society, the National Tuberculosis Association, the National Foundation for Infantile Paralysis, Inc., and by philanthropic agencies such as the Commonwealth Fund and the Rockefeller Foundation and similar bodies have been of vast benefit to the American people and are a natural outgrowth of the system of free enterprise and democracy that prevail in the United States. Their participation in a national health program should be encouraged, and the growth of such agencies when properly administered should be commended.

10. Fundamental to the promotion of the public health and alleviation of illness are WIDESPREAD EDUCATION IN THE FIELD OF HEALTH and the widest possible dissemination of information regarding the prevention of disease and its treatment by authoritative agencies. Health education should be considered a necessary function of all departments of public health, medical associations and school authorities.

# MEDICINE AND THE WAR

## ARMY

### WOMEN'S ARMY CORPS MEMBERS URGED TO REMAIN IN SERVICE

The War Department recently announced a program to encourage members of the Women's Army Corps to remain in service beyond their date of eligibility for separation to meet the critical shortage of skilled personnel in army hospitals, personnel centers and headquarters installations. In a directive to commanders of installations in this country and overseas, the War Department urged them to make every effort to encourage WAC officers and enlisted women to remain in service. The directive said:

"Owing to the critical shortage of skilled personnel available, it is desired that every effort be made to encourage personnel of the WAC with usable skills to volunteer for retention in the service. There is a critical requirement for skilled personnel in personnel centers, hospitals and headquarters installations. WAC volunteers whose skills cannot be utilized by the service in which they are serving will be encouraged to volunteer for service in another force. WAC volunteers may indicate a desire for overseas service, and such assignment will be made if feasible. However, no definite commitment for overseas service for WAC personnel can be made at this time."

The War Department also announced provisions whereby honorably discharged former enlisted Wacs may seek reentry into the service. Certain conditions exist for reentry:

1. Volunteers for reentry into the service must submit application in writing to the Adjutant General, Washington, D. C.

2. Volunteers for reentry into the service must volunteer either for the duration of the war plus six months or until Sept. 30, 1946, unless sooner relieved for the convenience of the government.

3. Volunteers must be between the ages of 20 and 50 years.

4. Volunteers must waive all rights to discharge because of marital status or age.

5. Volunteers must possess a skill usable by the War Department or a major continental force.

6. Volunteers will be accepted in the grade held at the time of discharge.

7. The duty assignment will be as directed by the War Department.

### NEW DIRECTOR OF SANITATION AND SANITARY ENGINEERING

Lieut. Col. John W. Regan, assistant director of the Sanitation and Sanitary Engineering Division, Preventive Medicine Service, was recently appointed director of that division, succeeding Col. William A. Hardenbergh. Colonel Regan graduated from Harvard Medical School, Boston, in 1936 and entered the regular army in 1940.

### ARMY AWARDS AND COMMENDATIONS

#### Major Herman L. Taft

Major Herman L. Taft, formerly of North Bergen, N. J., was recently awarded the Bronze Star for meritorious achievement in operations against the enemy on Mindanao in the Philippines. An accompanying citation disclosed that Major Taft, during the period from April 27 to July 5, 1945, as chief of the orthopedic section in an evacuation hospital, "worked diligently and tirelessly to provide his patients with the best possible care. During this period it was necessary to expand the hospital 50 per cent above its normal capacity. Among the battle casualties were a great number of serious orthopedic cases. By his superior surgical ability, his exercise of good judgment and his painstaking and serious thought he produced excellent results, saving many lives and limbs and preventing permanent disabilities. The example set by this officer and the results of his efforts were an inspiration to all who came in contact with him. His service during the Mindanao operation reflects great credit on himself, his profession and the military service." Dr. Taft graduated from Columbia University College of Physicians and Surgeons, New York, in 1929 and entered the service Aug. 18, 1942.

#### Colonel George G. Durst

The Bronze Star was recently awarded to Col. George G. Durst, formerly of Greenwood, S. C., "for meritorious service in connection with military operations as chief surgeon, Ground Force Reinforcement Command, and medical adviser to commanding general, Ground Force Reinforcement Command, European Theater of Operations, from Nov. 17, 1943 to May 3, 1945. Colonel Durst demonstrated broad professional and military knowledge in disseminating policies and definition concerning physical standards to be followed in declaring personnel limited assignment. By his alertness and constant insistence on proper medical screening he made sure that reinforcements passing through this command were in top physical condition prior to assignment to combat units. Colonel Durst's outstanding performance and devotion to duty contributed materially to the success of the war effort and reflect great credit on himself and the armed forces of the United States." Dr. Durst graduated from the Medical College of the State of South Carolina, Charleston, in 1937 and entered the service Jan. 1, 1941.

#### Lieutenant Colonel Oscar Eugene Nadeau

The Legion of Merit was recently awarded to Lieut. Col. Oscar E. Nadeau, Chicago, for outstanding work as medical officer in charge of the Fletcher General Hospital, Cambridge, Ohio. The citation accompanying the award read: "Colonel Nadeau's professional capacity and administrative ability were evidenced by the efficiency and high standards with which the surgical section functioned when peak numbers of the sick and wounded were hospitalized. From the date of activation to the cessation of hostilities, there was no surgical death recorded at this hospital, an achievement symbolizing the skill, resourcefulness and high level of care Colonel Nadeau provided for patients at Fletcher General Hospital." Dr. Nadeau graduated from Rush Medical College, Chicago, in 1913 and entered the service Oct. 1, 1942.

#### Captain Granville W. Larimore

The Army Commendation Ribbon was recently presented to Capt. Granville W. Larimore, chief of the Health Education Unit, Preventive Medicine Service, Office of the Surgeon General, for his work on control of venereal diseases at the Army Air Forces Southeast Training Center, Maxwell Field, Alabama. Dr. Larimore graduated from Rush Medical College, Chicago, in 1936. He entered the army from the Medical Reserve Corps in June 1942. Dr. Larimore is also the recipient of the Legion of Merit for his work in the Office of the Surgeon General.

#### Captain Peter Volpe

Capt. Peter Volpe, Columbus, Ohio, was recently awarded the Bronze Star for meritorious service as medical corps executive officer with the 76th Armored Medical Battalion. He received the award for action in France, Luxembourg and Belgium from December 1944 to February 1945, when, "by his courage, technical skill and outstanding devotion to duty he aided materially in the rapid evacuation of casualties and the saving of the lives of many American soldiers." Dr. Volpe graduated from the Ohio State University College of Medicine, Columbus, in 1931 and entered the service Sept. 4, 1942.

# MEDICAL OFFICERS RELEASED BY THE NAVY

## NAVAL RESERVE MEDICAL OFFICERS RECOMMENDED FOR RELEASE FROM ACTIVE DUTY

### Alabama

Forney, John Mc.....Tuscaloosa
Galbraith, James G.....Birmingham
Givhan, Edgar G. Jr.....Birmingham
Hankins, Gordon M.....Birmingham
Hubbard, Leslie H.....Wilton
Kimmey, John M.....Anniston
McCafferty, Emit L. Jr.....Mt. Vernon
Morton, Benjamin F.....Birmingham
O'Keefe, James P.....Birmingham
Roberts, Mack J.....Mobile
Smith, Henry R.....Birmingham

### Arizona

Callander, Russell J.....Tuscon
Carrell, William D.....Tuscon
De Pinto, Angus J.....Phoenix

### Arkansas

Baldridge, Max.....Conway
Bee, James E.....Mission
Bounds, Joseph B.....Little Rock
Compton, Neil E.....Fayettville
Cook, Raymond O.....Little Rock
Dean, Gilbert O.....Little Rock
Dean, Lee A.....De Queen
Foltz, Thomas P.....Fort Smith
Jones, William J.....Lanoke
Paddock, Charles S.....Fayetteville
Roberts, John N.....Little Rock
Stroud, Paul T.....Jonesboro

### California

Abelson, Sol M.....Los Angeles
Andrews, Herbert J.....Los Angeles
Bachhuber, Robert G.....Los Angeles
Bacon, Lyle C.....Pasadena
Badertacher, Victor A.....San Francisco
Barr, James A.....Piedmont
Barton, Edward, W., Jr.....San Gabriel
Beadner, Sol A.....San Diego
Bellamy, Donald F.....Oakland
Benbrook, Samuel P.....Beverly Hills
Billig, Harvey E. Jr.....Hollywood
Boe, Max R.....Alameda
Bogart, William M.....Oakland
Borley, William E.....Coronado
Bowman, Ernest R.....San Francisco
Boyer, Kenneth H.....N. Hollywood
Brady, John H.....Visalia
Brink, Holden E.....Santa Rosa
Brodovsky, Daniel.....San Jose
Brown, Albert L.....San Francisco
Brown, John L.....San Francisco
Budge, Edwin S. Jr.....Los Angeles
Burleigh, John S.....Los Angeles
Caldemeyer, Everett S.....Los Angeles
Carson, Andrew B.....Oakland
Carson, Donald A.....San Francisco
Collis, William H. L.....Stockton
Cushman, Glen F.....San Francisco
Cutshaw, Charles M.....Brawley
Dallas, Donald A.....San Francisco
Dassett, Joseph W.....Whittier
Dau, Neil J.....Fresno
Dietrich, Harry F.....Los Angeles
Dixon, Chester D.....Santa Monica
Dixon, Henry L.....Lynwood
Donaldson, Lincoln B.....Palo Alto
Downing, Francis H.....Fresno
Eldredge, Horace S.....Los Angeles
Ellwood, Paul M.....Oakland
Ervin, Edmund N.....Mill Valley
Ewer, John N.....Piedmont
Farr, Walter H.....Salinas
Fisher, Gaylord L.....Long Beach
Fountain, William E.....Mercer
French, Richard L.....Los Angeles
Garland, Leo H.....San Francisco
Gates, Russell G.....Santa Barbara
Gibbons, Ross M.....Vallejo

### California—Continued

Gleason, Aurelius L.....Oakland
Gorham, Frank W.....San Francisco
Grant, Leslie C.....Inglewood
Greenwood, Charles F.....Piedmont
Haft, Stanley S.....Los Angeles
Harr, Ralph V.....Santa Rosa
Harris, Thomas L.....Los Angeles
Hart, Melvin G.....Oakland
Hauck, Richard F.....Los Angeles
Henry, John R.....Oakland
Higgins, Laurie W.....San Diego
Holcomb, William F.....Oakland
Horwitz, Harry.....Oakland
Huenergardt, Howard A.....Oakland
Hyman, Earl.....Los Angeles
Jackson, John L.....Los Angeles
Johnson, Franklyn H.....Los Angeles
Johnson, Hilding R.....Sacramento
Johnson, Paul A. G.....La Jolla
Jones, Milton R.....Claremont
Kaven, Henry A.....Oakland
Kilgus, John H.....San Francisco
Kinzer, Everett E.....San Marino
Kirby, Harry W. B.....Los Angeles
Lamb, Woodburn K.....Oakland
Langley, Robert W.....Los Angeles
Larkey, Jefferson.....Oakland
Lawler, William H.....Salinas
Lorenz, George Jr.....Glenside
Ludden, Jerome A. Jr.....Watsonville
Lund, Le Val.....Los Angeles
Lynn, William F.....Altadena
Mackenzie, Alexander S. G.....Burlingame
MacPherson, John D.....San Diego
Maddox, John D.....Coronado
Maisler, Sol.....San Francisco
Mather, Ralph W.....Los Angeles
Matzer, Edward.....San Francisco
Mayers, Morton M.....Glendale
Meherin, Joseph M.....San Francisco
Mehlin, George B.....San Diego
Meisburger, Richard G.....Los Angeles
Milton, James T.....San Diego
Murray, William H. T.....Santa Monica
Nagle, John M.....San Francisco
Needles, Louis J.....Hollywood
Newman, Henry W.....Belvedere
Newton, Miram D.....Le Mesa
Novy, Frederick G., Jr.....Berkeley
O'Connor, Joseph P.....Pasadena
Oliver, Wrenshall A.....San Francisco
O'Neill, Thomas J.....Los Angeles
Overmyer, J. W.....San Jose
Paul, Sarkis B.....San Francisco
Pier, Harry McKay.....Oakland
Reeves, James E.....San Diego
Reid, Richard H.....Toulumne
Reynolds, Theodore E.....Piedmont
Riskind, Lester A.....Beverly Hills
Roberts, Gilbert J.....Claremont
Rosenblum, Harold H.....San Francisco
Roy, Gustave A.....San Diego
Scarlett, Samuel L.....San Francisco
Schlappi, John C.....San Diego
Schlumberger, Frederick C..Los Angeles
Scobee, James E.....San Francisco
Seitter, Paul F.....San Fernando
Shackford Bart. C....Palos Verdes Ests.
Sharpsteen, Jay R.....Piedmont
Shaw, Gerald W.....Los Angeles
Siefert, John L.....Berkeley
Silton, Maurice Z.....Los Angeles
Smith, Gregory.....San Francisco
Smith, James B.....San Francisco
Sorauf, Bernard M.....Fresno
Stallone, Jasper J.....Berkeley
Stevens, Joseph B.....Los Angeles
Stevenson, Charles C.....Piedmont
St. Geme, Joseph W.....Los Angeles

### California—Continued

Stimson, Clement A.....Petaluma
Stratton, James M.....Berkeley
Sumner, William A.....San Francisco
Susnow, David A.....San Francisco
Swengel, Winton F.....Pacific Grove
Szurek, Stanislaus A.....San Francisco
Tanton, Harry A.....Los Angeles
Taylor, Edwin M.....Piedmont
Thomas, William M.....Palo Alto
Thomason, Sidney D.....Claremont
Tillman, Carl-Gustaf Didrik....Belmont
Toffelmier, Douglas D.....Oakland
Toller, Rudolph B.....Stockton
Trombley, Robert A.....San Diego
Turkel, Abraham W.....San Francisco
Van Cott, Wesley B.....Los Angeles
Vogelman, Jack G.....San Jose
Wadsworth, Elmer E. Jr.....Alhambra
Wagner, Richard J.....San Francisco
Wallerious, Raymond M.....Sacramento
Walthall, Felix E.....Bakerfield
Weatherman, Harold V.....San Diego
Williams, Joseph B.....Culver City
Winnard, Wellington, F. R..Los Angeles
Wood, Otho T.....San Francisco

### Colorado

Buck, George R.....Denver
DeOnier, Carl W. H.....Denver
De Roos, John J.....Denver
Hamilton, Lester L.....Springfield
Tucker, Warren W.....Denver
Wyatt, Kon.....Denver
Savage, Raymond J.....Denver

### Connecticut

Arnold, Herman B.....Woodbridge
Bernstein, Dwight J.....New Britain
Harris, Benedict R.....Hamden
Hubert, Gilbert R.....Torrington
Parshley, Philip F.....Hartford
Irwin, Harold H.....New London
Murphy, Charles A.....Stamford
Stygar, Joseph S.....Derby
Wilcox, Frederick C. Jr.....Hamden

### Delaware

Heck, Alfred L.....Wilmington

### District of Columbia

Caulk, Ralph M.....Washington
Coffey, Robert J.....Washington
Cohen, Maynard I.....Washington
Connolly, Alysius J. B.....Washington
Downey, Harold R.....Washington
Duff, Alexander McGill Jr...Washington
Klein, Elmer.....Washington
Nicklas, Edward W.....Washington
McNamara, Alexander.....Washington
Lebensohn, Zigmond M.....Washington
O'Donnell, Paul J.....Washington
O'Keefe, James A.....Washington
Zylman, Jacob D.....Washington

### Florida

Blum, Otto S.....Miami
Boettner, Julius F.....Fort Lauderdale
Clarholm, Victor.....Palm Beach
Collins, Grover C.....Gainesville
Hagwood, John D.....Clearwater
Harris, Robert M.....Miami
Marcus, Nathan L.....Tampa
Rubens, Eli.....Fort Pierce
Shallow, Bernard H.....Key West

### Georgia

Andrews, Charles R. Jr.....Canton
Baird, James M.....Columbus
Blum, Leo J. Jr.....Macon
Burleigh, Bruce D.....Augusta
Crawford, Hugh.....Toccoa

# MEDICAL OFFICERS RELEASED BY THE NAVY

### Georgia—Continued

Dunn, James G.....Blakeley
Edwards, William T. Jr.....Decatur
Field, Charles H.....Macon
Fowler, Clarence D.....Atlanta
Gershon, Nathan I.....Atlanta
Hahne, Leonard J.....Savannah
McDaniel, James G.....Atlanta
Morrison, Howard J.....Savannah
Norman, Lewis G. Jr.....West Point
Seymour, Glenn E.....Albany
Sims, George P.....Columbus
Smith, Charles M.....Atlanta
Thomas, Frank E.....Albany
Tye, James P.....Albany
Willcox, William D.....Fitzgerald

### Idaho

Anderson, Vern H.....Buhl
Beymer, Charles B.....Twin Falls
Chaloupka, Howard M.....Boise
Crockett, Kenneth A.....Preston
Cutler, Morton.....Preston
Fuendeling, Mervyn J.....Twin Falls
Hatch, John S.....Idaho Falls
Howard, Forrest H.....Shoshone
Jones, Everett N.....Boise
Loehr, Doyle M.....Moscow
Moritz, John R.....Sun Valley
Morton, Herschel B.....Coeur D'Alene
Rees, Ellwood T.....Twin Falls
Shaw, Manley B.....Boise
Thompson, Luther C.....Gooding

### Illinois

Ashby, John S.....Millbrook
Ashley, Paul.....Chicago
Balcke, Louis A.....Pekin
Ball, Orrie H., Jr.....Bloomington
Barth, Earl E.....Chicago
Bennett, David A.....Canton
Bergstrom, Paul L.....Kirkland
Bond, Clinton S.....Rochelle
Brown, Hyman N.....Chicago
Bussey, Frederick N.....Chicago
Carey, James H.....Joliet
Chor, Herman.....Chicago
Clancy, Edward J.....Chicago
Cronin, John J. Jr.....River Forest
Crowley, Edward X.....Chicago
De Lozier, Leonard C....Peoria Heights
Dilts, Preston V.....Pittsfield
Ditkowsky, Samuel E.....Chicago
Droegemueller, Edmund H.....Elmhurst
Edinburg, Jack J.....Chicago
Evans, Edward G.....Aurora
Flack, Clarence E.....River Forest
Fox, Theodore A.....Chicago
Freriks, Dick J.....La Grande
Friedell, Morris T.....Chicago
Geer, Paul I.....Cicero
Gowdy, Franklin K.....Glencoem
Hamilton, Eugene G.....Jacksonville
Hamilton, Gene C.....Chicago
Harter, Joseph A.....Chicago
Hausman, Charles M.....Chicago
Hepner, Paul E.....Danville
Johnson, John R.....Chicago
Kearney, James F.....Chicago
Kearns, Jerry J.....Chicago
Laury, Everett M.....Chicago
Lederer, Francis L.....Chicago
Lengyel, Carl E.....Lincoln
Long, Hugo.....Chicago Heights
Lutz, Jacob F.....Chicago
Lynn, Lawrence W.....Chicago
Mastri, Aquil.....Chicago
McGuinness, George A.....Chicago
Monaco, Joseph T.....Oak Park
Montgomery, Burtis E.....Harrisburg
Nerger, Vernon D.....Oak Park
Newman, Louis B.....Chicago
Nourie, Raymond L.....Kankakee

### Illinois—Continued

Parratt, Louis W.....Chicago
Patterson, John B.....Beardstown
Peterson, Philip L.....Brookfield
Petri, Kenneth N.....Peoria
Pollock, Frederic J.....Chicago
Poticha, Joseph S.....Chicago
Price, Robert G.....Bloomington
Rosenberg, David H.....Chicago
Ross, Charles A.....Galesburg
Ryan, Harry E.....Centralia
Rottschafer, Henry W.....Berwyn
Schiek, Charles M.....Belleville
Schriver, J. Stanley.....Chicago
Schroeder, John H.....Waukegan
See, William B.....Chicago
Shronts, John F.....Woodstock
Siegert, Frederick W.....Pana
Smith, Lymon W.....Barrington
Smith, Winston W.....Gurnee
Spafford, Howard E.....DeKalb
Steigmann, Frederick.....Chicago
Steiner, Clifford J.....Chicago
Van Ness, Edwin B.....Normal
Ward, Edward J.....Peoria
Ward, James A.....Metropolis
Waters, Harvey C.....Oak Park
Wyman, John F.....Chicago

### Indiana

King, Joseph W.....Anderson
Weaver, William W.....New Albany
Wilson, Leslie.....Ft. Wayne
Brown, Wendell E.....Indianapolis
Dunlap, David L.....South Bend
Hays, Everett L.....Indianapolis
Henry, Russell S.....Indianapolis
Hoppenrath, Wesley M.....Elwood
Jackson, John K.....Aurora
Johnson, George M.....Indianapolis
Popp, Milton F.....Fort Wayne
Rendel, Donald T.....Hammond
Robertson, William S.....Spiceland
Selby, Keith E.....South Bend
Thayer, Benet W.....North Vernon

### Iowa

Bates, Maurice T.....Des Moines
Bisgard, Carl V.....Harlan
Buchanan, John J.....Milford
Callahan, George D.....Iowa City
Chase, William B. Jr.....Des Moines
Dawson, Emerson B.....Fort Dodge
Edwards, Charles V.....Council Bluffs
Fail, Charles S. Jr.....Adel
Floersch, Eugene B.....Council Bluffs
Foley, Thomas H.....Dubuque
Grau, Amandus H.....Denison
Gross, Alvin J.....Harlan
Hennessy, James D.....Council Bluffs
Hibbs, Donald K.....Ames
Kelberg, Melvin R.....Iowa City
Klocksiem, Roy G.....Des Moines
Marquis, George S.....Des Moines
Mast, Truman M.....Washington
Miller, Donald F.....Williamsburg
Murphy, James H.....Des Moines
Nagyfy, Stephen F.....Iowa City
Newman, Robert W.....Iowa City
Norment, John E.....Clinton
Noun, Louis J.....Des Moines
Osborn, Clarence R.....Dexter
Phillips, Allan B.....Clear Lake
Smith, Carl W.....Dubuque
Smith, Harold F.....Iowa City
Sohm, Herbert A.....Des Moines
Springer, Floyd A.....Des Moines
Stevenson, William W.....Rockwell City
Strauss, Eugene C.....Waterloo
Towle, Robert A.....Iowa City
Trunnell, Thomas L.....Waterloo
Whitehouse, William N.....Ottumwa
Wirtz, Dwight C.....Des Moines

### Kansas

Anderson, Severt A.....Morganville
Barr, John F.....Ottawa
Bitzer, Donald A.....Washington
Brown, John A. III.....Washington
Carr, Robert M.....Junction City
Collins, Thomas R.....Emporia
Danielson, Arthur D.....Herington
Davis, David R.....Emporia
Donnell, Louis A.....Wichita
Fernie, Robert W., Jr.....Hutchinson
Helwig, George F.....Topeka
Hertzler, John W.....Newton
Hibbard, James S.....Wichita
Hill, James E.....Wellington
Hinton, Elmer E.....Hiawatha
Holter, Harold V.....Kansas City
Irby, Addison C.....Fort Scott
Jeffries, Robert C.....Atchison
Jones, Richard C.....Sterling
Kerr, Richard K.....Lincoln
Krehbiel, Bertrand I.....Topeka
Muller, Samuel B.....Overland Park
O'Donnell, Harold F.....Wichita
Pyle, Lucien R.....Topeka
Read, William T.....Coffeyville
Rettenmaier, Albert J.....Kansas City
Robinson, Edgar L.....Lawrence
Spencer, Harold F.....Garnett
Stitt, Paul L.....Hardtner
Wallen, James E.....Ottawa
Wier, Charles K.....Wichita
Wildgren, Bernard C.....Hoisington

### Kentucky

Banks, Duane E.....Louisville
Barnes, Kenneth I.....Princeton
Craddock, James E.....Louisville
Faulkner, Charles R.....Mt. Sterling
Hamilton, Richard A.....Springfield
Hunter, Robert G.....Mt. Sterling
Pauli, Augustus J.....Louisville
Savage, William M.....Maysville
Smith, William P.....Corbin
Sparks, Clyde C.....Ashland
Williams, Frederick M.....Louisville

### Louisiana

Baker, Sidney F.....Shreveport
Christman, Ralph J.....New Orleans
Custer, Jasper L.....Shreveport
Faust, Frank L.....New Orleans
Ferguson, Benjamin W.....Shreveport
George, Jackson S.....Laplace
Gladney, Thomas Y.....Baton Rouge
Keller, Clifford La Dore...Church Point
Miller, David S.....Baton Rouge
Pruitt, Alton R.....Cheneyville
Ridgeway, Elmer, Jr.....New Orleans
Riggs, Ralph H.....Shreveport
Robinson, Lewis S. Jr.....New Orleans
St. Martin, Eugene C.....Houma
Tedder, James W.....New Orleans
York, Justin O.....New Orleans

### Maine

Bernard, Albert J.....Skowhegan
Coffin, Raymond B.....Portland
Daniels, Donald H.....S. Portland
Gidman, Francis T.....Rumford
Hill, Allen M.....Monset
Leighton, Wilbur F.....Portland
Springer, Frank L.....Farmington

### Maryland

Battaglia, Dominic T.....Baltimore
Cohen, Robert A.....Towson
Doeller, Charles H. Jr.....Baltimore
Futcher, Palmer H.....Baltimore
Harris, Aaron.....Baltimore
Hodes, Horace L.....Baltimore
Kallins, Edward S.....Baltimore
MacGowan, Birkhead.....Baltimore
Rinne, John I. Jr.....Annapolis

# MEDICAL OFFICERS RELEASED BY THE NAVY

### Maryland—Continued

Rozum, John K.....Cumberland
Ruzicka, Edwin R.....Baltimore
Trevaskis, Richard W. Jr...Cumberland
Waters, Zack J.....Baltimore
Young, Asa D.....Baltimore

### Massachusetts

Albert, Samuel M.....Beverly
Beck, James S. P.....Shrewsbury
Benson, Harry L.....Winchester
Bergin, Paul F.....Worcester
Bixby, Harry I.....Brookline
Bourke, Robert W.....Walpole
Brailey, Allen G.....Newton Highlands
Brown, Byron F.....Hopedale
Burnham, Leon R.....Lynn
Carnicelli, Thomas J.....Framingham
Carson, Parker C.....Longmeadow
Cartier, Roland R.....Rutland
Collins, Gerald M.....Weymouth
Curtiss, David P.....Williamstown
Dawson, William E.....Taunton
Derow, Sidney.....Boston
Derrick, Charles C.....Stockbridge
Doyle, Joseph B.....Boston
Dunlop, George R.....Worcester
Fagan, John F. Jr.....Boston
Fielding, Bennett I.....Worcester
Fletcher, Kenneth S.....Chicopee
Forbes, Alexander.....Milton
Forsley, Edward T.....Lenox
Fothergill, LeRoy D.....Lexington
Gauld, Archibald G.....Cohasset
Giesen, Joseph H.....Brighton
Glidden, Henry S.....Tewksbury
Goodale, Raymond H.....Worcester
Gorman, Richard J.....Wichenden
Grush, Herman B.....Beverly
Hamlin, Hannibal.....Weston
Hardy, Irad B. Jr.....Waltham
Hayes, John J. Jr.....Boston
Hazard, Sprague W.....Rehobeth
Herrick, Charles A.....Manchester
Hight, Donald.....Worcester
Hook, William G.....Danvers
Houghton, John D.....Brookline
Hudson, Henry W.....Waban
Hunt, Richard J.....Stoneham
Leary, Gerald C.....Lawrence
Leighton, Herbert T.....Brookline
Levine, Saul C.....Malden
Lewis, James P.....Brookline
Lynch, George W.....Woburn
Lyons, George H.....Boston
Mabrey, Roy E.....Boston
McGinn, Sylvester.....Newton Center
Menzies, Marshall M.....Westfield
Messier, Paul E.....Worcester
Peterson, Thomas H.....Newton Center
Poland, Warren M.....Gloucester
Reilly, Thomas F.....Springfield
Russman, Benjamin.....W. Somerville
Sanborn, Frederick.....Winchester
Schwartz, Louis N.....Dorchester
Sewall, Kenneth W.....Boston
Shippen, Eugene R. Jr.....Melrose
Silverman, Irving.....Revere
Smead, James L.....Springfield
Solomon, Philip.....Brookline
Sternstein, Herman J.....Chestnut Hill
Stockwell, Frank W.....Newburyport
Suchnicki, Emil F.....New Bedford
Swan, Charles L., Jr.....Stoughton
Tisdale, Eben D.....Taunton
Tolman, Maurice M.....Chelsea
White, Thomas P.....Newton
Wisner, Frank B.....Ludlow
Wood, Harold.....Clinton
Wyman, Edward R.....Great Barrington

### Michigan

Adams, Frederick M.....Birmingham
Bald, Frederick W.....Flint
Balyeat, Gordon W.....Grand Rapids
Barker, Vincent L.....Monroe
Beam, Arthur D.....Grosse Pt.
Berg, Lawrence "A".....Sturgis
Bishop, Harry M.....Saginaw
Brines, Osborne A.....Detroit
Brink, James R.....Grand Rapids
Brown, John R.....Marine City
Brown, Rolland J.....St. Joseph
Clark, Benjamin W.....Grosse Pt. Park
Cooper, Robert J.....Pontiac
Coventry, Mark B.....Detroit
Crane, Harold D.....Grand Rapids
Crowell, Richard C.....St. Joseph
Denman, Dean C.....Monroe
Ersfeld, Murray P.....Detroit
Farney, Jacob P.....Detroit
Finton, Max A.....Jackson
Flora, William R.....Detroit
Goodrich, Benjamin E.....Pleasant Ridge
Graham, Bernard J.....Alma
Hague, Robert F.....Flushing
Harris, Harold H.....Dearborn
Hart, Dean W.....St. Johns
Hasseberger, John B.....Birmingham
Heavner, Lyle E.....Detroit
Hodges, Kenneth P.....Lansing
Hornbogen, Daniel P.....Marquette
Humphrey, Arthur A.....Battle Creek
Johnson, Merlin H.....Gladstone
Kerr, William B.....Saginaw
King, Melbourne J.....Detroit
Kline, John R.....Detroit
Le Gallee, George M.....Detroit
Ludwig, Frederick B.....Port Huron
Maguire, Andrew J.....Utica
McCue, Francis J.....Hudson
McEvoy, Francis J.....Huntington Woods
McGurl, Frank J.....Grosse Point
Miller, Thomas H.....Detroit
Moloney, James C.....Birmingham
Morley, Harold V.....Detroit
Pike, Donald G.....Detroit
Pinkerton, Harold A.....Ironwood
Potter, Earl C.....Lansing
Roth, George E.....Detroit
Rottschafer, John L.....Alma
Ryan, Frederick C.....Kalamazoo
Schmidt, Milton R.....Trenton
Schrier, Paul G.....Kalamazoo
Schwartz, Louis A.....Detroit
Sherrin, Edgar R.....Detroit
Sorum, Eugene B.....Eloise
Spurrier, Ethelbert.....Grosse Pointe
Steffe, Ralph S.....Albion
Stolpman, Albert K.....Birmingham
Thirlby, Richard L.....Traverse City
Thompson, Edward C.....Flint
White, Carl H.....Fenton
Wickham, Woodward A.....Jackson

### Minnesota

Adair, Albert F. Jr.....St. Paul
Auten, Donald R.....Rochester
Batty, John L.....Hibbing
Bessesen, Alfred N. Jr.....Minneapolis
Brown, Hugh S.....Rochester
Coombs, Carl H.....Cass Lake
Cranston, Robert W.....Minneapolis
Dahle, Manford B.....Glenwood
Doyle, George C.....Duluth
Fait, Roman V.....Little Falls
Feuling, John C.....Bovey
Fritzell, Kenneth E.....Minneapolis
Frost, Russell H.....Owatonna
Haugen, John A.....Minneapolis
Houston, Donald M.....Park Rapids
Hruza, William J.....Minneapolis
Lufkin, Nathaniel H.....Minneapolis
Macklin, William E. Jr.....Litchfield
McDonnell, James L.....St. Paul
Monson, Leonard J.....Canby
Mouritsen, Glenn J.....Fergus Falls
Murphy, Edmund P.....Minneapolis
Nelson, Maynard C.....Minneapolis

### Minnesota—Continued

Nelson, Oscar L. N.....Minneapolis
Poore, John C.....Isle
Prins, Leo R. Jr.....Albert Lea
Roberts, Lewis J.....Minneapolis
Roberts, Stanley W.....Minneapolis
Russeth, Arthur N.....Minneapolis
Schroeckenstein, Hugo F.....St. Paul
Skaug, Harold M.....Chaffield
Snell, Albert M.....Rochester
Soucheray, Philip H.....St. Paul
Stemsrud, Harold L.....Alexandria
Thompson, Gershom J.....Rochester

### Mississippi

Crawford, Everett H.....Tylertown
Hays, Frank B.....Grenada
Ramsay, Thomas R.....Laurel
Sheely, Efford Eugene.....Jackson
Sloan, Joseph M.....Jackson
West, Edwin H.....Lucedale

### Missouri

Barger, John A.....St. Louis
Barger, John B.....University City
Erni, Harry E.....College Mound
Fowler, Ivyl C.....Kansas City
Furlow, Leonard T.....St. Louis
Gist, William W.....Kansas City
Greene, Harry L.....Hannibal
Jones, John J.....La Platte
Kloepper, Victor F.....St. Louis
Lauderdale, James A.....Jackson
Lemmon, George B. Jr.....Springfield
MacCamy, Edwin T.....St. Louis
Murphy, Bernard L.....Hannibal
Pedigo, Myron B.....Moberly
Perry, Ralph.....Kansas City
Satterfield, Val B.....St. Louis
Scott, Wendell G.....St. Louis
Seabaugh, Dayton R.....Jackson
Senne, Herbert C.....St. Joseph
Taylor, Leo T.....Exeter
Tremain, Irl G.....St. Louis
Vitt, Edwin F.....Clayton
Wilkinson, Everett A.....Kansas City

### Montana

Harris, William E.....Livingston

### Nebraska

Barr, Joseph H.....Pawnee City
Bitner, Christian U.....Sidney
Calhoun, Orange V.....Lincoln
Fechner, Albert H.....Lincoln
Gridley, Lawrence J.....Omaha
Hubenka, Albin H.....Omaha
Keiser, Alvin F.....Omaha
Koebbe, Ezra E.....Columbus
McDermott, Kenneth F.....Grand Island
Munsell, Donald W.....Lincoln
Neely, John M.....Lincoln
Peck, Willard R.....Omaha
Rasgorshek, Robert H.....Omaha
Rembolt, Raymond R.....Lincoln
Sinclair, Roy D.....Chadron
Wigton, Robert S.....Omaha
Wood, Maynard A.....Lincoln

### Nevada

O'Donnell, Robert P.....Elko
Ross, Silas E. Jr.....Reno

### New Hampshire

Bryer, Wayne P.....Exeter
Forsberg, Philip M. L.....Concord
Halligan, Thomas J.....Concord
Hayward, Oliver S.....New London
Haubrich, Bernard P.....W. Claremont
Lewowicz, Stanley C.....Nashua
Moran, Edward P.....Nashua
Moriarty, John D.....Concord
Shields, Joseph D. Jr.....Concord
Sinclair, William Jr.....Hanover

# MEDICAL OFFICERS RELEASED BY THE NAVY

### New York

Amoury, Emanuel J.....New York
Anna, Wilfrid M.....Lockport
Argue, Thomas H.....Corning
Arida, Hickmet K.....Brooklyn
Bancks, Howard R.....Brooklyn
Billo, Otto E.....Bronxville
Bloch, Charles L.....Rochester
Bloemers, Harms W.....New York
Bly, Loren P.....Cuba
Briggs, Edward W., Jr.....Wingdale
Carpenter, Eugene W.....Oneida
Carrougher, Clinton F.....Brooklyn
Chandler, Charles F.....New York
Delmonico, Edward J.....Auburn
De Mello, Lopo.....E. Aurora
Devitt, Frederick B.....Oneonta
Dick Arthur J.....Flushing
Dowling, Alexander S.....Corning
Doyle, William J.....Utica
Duley, William W.....New York
Dunlap, Robert M.....New York
Elwood, Michael J.....Syracuse
Emerson. Kendall Jr.....New York
Enselberg, Charles D.....New York
Goepfert, Valentine F.....Astoria, L. I.
Goodman, Carlon H. M.....Binghamton
Gorbea, Ricardo L.....New York
Gosis, Michael.....Ozone Park
Greenberg, Aaron E.....Brooklyn
Howeth, John L.....New York
Hubner, Edmund H.....Yonkers
Hughes, Delmar V.....New Rochelle
Ingraham, Hollis S.....Ulster Park
Jaques, Alan A.....Rockville Center
Lovett, Raymond J.....Solvay
Mackenzie, Locke L.....New York
Macnamara, W. P...Jackson Hghts., L. I.
Marrone, Joseph.....Manhasset, L. I.
Matusak, George J.....Buffalo
Pope, Charles L.....Binghamton
Preston, Alexander P.....Middletown
Randell, Ralph L.....Jamestown
Razzano, C. L.....Williston Park, L. I.
Rearden, John B.....Bayside
Reilly, John J.....Staten Island
Retan, Henry W.....Syracuse
Robins, Arthur B.....Brooklyn
Sestero, Enzo F.....Bronx
Severud, Olaf J.....Bogota
Shoemaker, Edwin A.....Lockport
Sidnam, David I.....Solvay
Silbermann, Eugene J.....New York
Simmons, Bradford.....Rochester
Smith, Frank Raymond.....New York
Snyder, Perrin B.....New York
Steege, Theodore W.....New York
Steele, James M.....Jamestown
Steen, Reginald R.....Hempstead
Stone, Charles M.....Jamaica, L. I.
Straatsma, Clarence R.....New Rochelle
Stuard, Henry D.....Genoa
Stump, John P.....New York
Sulzberger, Marion B.....New York
Tartaglione, Edward F..Long Island City
Thompson, Parker C.....Brooklyn
Torrance, Calvin C.....Jamestown
Town, Arno E.....New York
Tyler, William A.....Canton
Ullman, Sanford.....Buffalo
Unger, Louis.....Brooklyn
Walker, Duane B.....Rochester
Walker, Harold L.....Elmira
Wallace, Charles S.....Ithaca
Walsh, Carle D.....Great Hills
Walsh, Thomas S. Jr.....Watervliet
Wander, Maurice C....Kings, Park, L. I.
Weeks, Dana A.....Peru
Weisl, Bernard A. G.....New York
Welch, Lauren G.....Niagara Falls
White, Albert I.....Hopewell Junction
Whitehead, Hugh G. Jr..Cedarhurst, L. I.
Williams, Frank D.....Cicero
Wolf, John S. Jr.....Rochester
Wright, Lewis H.....Great Neck

### North Carolina

Armentrout, Charles H.....Lexington
Bowman, Charles R.....Kannapolis
Bradford, George E.....Winston-Salem
Crump, Cecil L.....Asheville
Deaton, Paul Mc.....Statesville
Griffin, Harold W.....Hickory
Hamrick, John C.....Shelby
Makepeace, Alexander W....Chapel Hill
Mattison, William L.....Raleigh
Osborne, Joseph E.....Rosman
Rogers, George C.....Graham
Russell, William M.....Asheville
Stutz, Malcolm G.....Southern Pines
Welfare, Charles R.....Winston-Salem
Westmoreland, Joseph R.....Canton

### North Dakota

Burt, Arthur C.....N. Fargo
Haugrud, Earl M.....Fargo
Hoffman, Sidney J.....Dickinson

### Ohio

Baumes, Ogden H. Jr.....Cincinnati
Baurichter, Frederick P.....Cincinnati
Bayha, Carl H.....Toledo
Bone, Ralph M.....Cleveland
Bryant, Richard D.....Cincinnati
Cauffield, Edwin W.....Everett
Coulson, Austin A.....Malta
Davis, Mel A.....Painesville
Davison, Leo E.....Portsmouth
Diamond, Adrian.....Cincinnati
Eichner, Eduard.....Cleveland
Faircloth, William B.....Zanesville
Fitzgerald, Edmond W.....Toledo
Garvin, Edward R.....Toledo
Geoghegan, Thomas W.....Fostoria
Harris, Lloyd E.....Springfield
Huesman, Aloysius J.....Cincinnati
Jackson, Elmer L.....Shelby
Johanson, Hilding R.....Kenton
Jones, Daniel V.....Cincinnati
Joseph, James W.....Cincinnati
Kellogg, Paul E.....Ashland
Knierim, Harlin G.....Mansfield
Koehler, Joseph S.....Dayton
Kuhn, Howard N.....Bellevue
Mannhardt, Herman W...Bowling Green
McMath, Joseph St.....Wyoming
Nenninger, John R.....Cincinnati
Nosik, William A.....Cleveland Heights
Nusbaum, Wilford D.....Lancaster
Parker, Watson D.....Sandusky
Peters, Eugene W.....Cleveland
Pfanner, Eugene F.....Dayton
Pritz, Walter L.....Cincinnati
Ralston, John F.....Cleveland
Rector, Lewis E.....Akron
Sheldon, Dean E.....Sandusky
Sovik, William E.....Youngstown
Speicher, Clyde M....Cleveland Heights
Weems, Philip D.....Portsmouth
William, Guy H. Jr.....Macedonia
Wolpaw, Benjamin J.....Cleveland
Yates, Ralph D.....Piqua

### Oklahoma

Devanney, Louis R.....Sayre
Duer, Joe L.....Woodward
Fulton, Clifford C.....Oklahoma City
Gallaher, Paul C.....Shawnee
Harrison, Lynn H.....Oklahoma City
Hartford, Walter K.....Oklahoma City
Hawley, Hugh H.....Stillwater
Hoover, Wilkie D.....Tulsa
Moxley, Joseph N.....Ardmore
Rinker, William S.....Tulsa
Sterzbach, Charles W.....Tulsa
Ward, Benjamin W.....Tulsa
Winkelman, George W....Oklahoma City

### Oregon

Brown, Hugh J.....Tillamook
Cheetham, John G.....Garden Home
Davis, Joe B.....Salem
Enos, Russell W.....Portland
Grant, Charles A.....Baker
Herren, Robert Y.....Portland
Johnson, James H.....Portland
Kennedy, Marshall R.....Eugene
Norton, Henry H.....Eugene
Payne, DeWalt.....The Dalles
Reichman, Carl V.....Klamath Falls
Taylor, David K.....Portland
Wells, Stanley E.....Hood River
Wilcox, Richard H.....Pendleton
Zeller, Werner E.....Portland

### Pennsylvania

Bradford, Paul L.....Oxford
Barckley, Rhomas W.....Riegelsville
Bream, Charles A.....Midland
Dowd, Thomas F.....Philadelphia
Dunn, Cedric E.....Beaver Falls
Farrell, James I.....Bradford
Filson, Homer W.....Butler
Finnegan, William F.....Lebanon
Hauck, Samuel M.....Lancaster
Hayes, Martin F.....Philadelphia
Heller, Jacob R.....Allentown
Hines, Joseph F.....Dunmore
McClelland, Herbert C.....Lebanon
McCloy, Mettitt J.....Mt. Pleasant
Miller, Charles K.....Philadelphia
Wagner, Joseph A.....Upper Darby
Wilkins, Byron D.....Allentown
Winchell, Alexander V.....Rosemont

### Rhode Island

Clancey, Daniel J.....Newport
Dotterer, Charles A. Jr.....Newport
Hoey, Waldo O.....Rumford
La Pierre, Arnaud R.....Westerly
Little, Mervyn H.....Washington
Margold, Allen M.....Newport
Pournaras, Nicholas A.....Providence
Vandale, Albert L.....Pawtucket
Vaughn, Arthur H.....Providence

### South Carolina

Cleckley, James J.....Bamberg
Fleming, John M.....Spartanburg
Preacher, Abner B.....Allendale
Ross, Robert A.....Charleston
Taliaferro, Richard M.....Columbia
Turner, William P.....Greenwood

### South Dakota

Delaney, Wm. A. Jr.....Mitchell

### Tennessee

Baird, Hubert M.....La Follette
Braun, William T.....Memphis
Bringle, Carey G.....Memphis
Ching, Richard E.....Memphis
Crawford, Phillip T.....Memphis
Griffin, James C.....Memphis
Hastings, Walter D. Jr.....Columbia
Killeffer, Louis A.....Harriman
Lotz, John H.....Memphis
Lowry, Telford A.....Chattanooga
Mathis, James R.....Burns
Mitchell, Edward D. Jr.....Memphis
Mobley, Joseph C.....Memphis
Penn, Herschel.....Knoxville
Price, Raymond M.....Sweetwater
Tirrill, Willard O. Jr.....Nashville
Thach, Andrew B. Jr.....Nashville
Taylor, Robert C.....Memphis
Williams, Orville K.....Knoxville

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### CHANGES

Tumolo, Mauro A., Lt. Comdr., Green Cove Springs, Fla. Reported on list 12-1-45. Was not relieved from active duty.

# ORGANIZATION SECTION

## ANNUAL CONFERENCE OF SECRETARIES AND EDITORS OF CONSTITUENT STATE MEDICAL ASSOCIATIONS

DR. CREIGHTON BARKER, New Haven, Conn., Presiding

FRIDAY, FEBRUARY 8—MORNING

DR. R. L. SENSENICH, Chairman of the Board of Trustees: These meetings have been of tremendous interest and of equally great importance in the conduct of the affairs of the Association. Discussions have from time to time varied from subjects of national importance to matters that were more local. At present we are confronted with a national situation which takes precedence over most of the subjects which we might otherwise discuss. The statement has been made that medicine is maladjusted to the social structure. The implication is that medicine has made no changes and has not progressed and society has by reason of its changes gone entirely away from us. To that I take exception. I think medicine has been realistic and has not been maladjusted or backward. On the contrary, it has brought to the whole people a true reflection of the advances in medical science. I would say society was maladjusted to its own advances, at least economically, whereas medicine has continued to function and has served all. The economic side of medicine offers some problems which are not impossible of solution. If there are changes to be made it is our responsibility to assist in bringing about those changes, but it is important that we know in what respect changes shall be made and, if not extensive, the modifications in our economic pattern should be of a kind which will make medicine available to all the people. Our policies are determined by the House of Delegates, but it is up to the Board of Trustees and the representatives of the constituent societies to shape the pattern of medical care within the structure as set up by the policies that the House of Delegates has put down for us. The responsibility lies to a greater extent with you who represent the constituent societies, as editors and secretaries, probably to a greater extent than any other group in the organized profession. You do much to form the pattern of activity in the various states and to assist in the carrying out of that pattern; in addition you are in better position to reflect the attitude of the public in your contacts in the constituent and component societies than is any other group. Some attitudes are local and some plans are local. Some of them are not practicable of national application, no matter how active the local enthusiasm in promoting them. This, then, is a clinic. We have brought to this clinic those men who can report on conditions and provide new thought with reference to meeting various problems on the basis of the established facts, diagnoses, methods and, what is still more important, the results of those treatments. I want to emphasize the importance of knowing the unsuccessful efforts as well as the successful ones. Dr. Leland used to claim that nobody ever told about the failures. That is unfortunate. Perhaps competitive thinking between state societies has reacted in the direction of making us all want to have many successes checked to our credit. We are disinclined to be realistic or quite frank in the admission of our failures, and especially in calling attention to the things that made the failures.

### Current Status of Medical Legislation

MR. J. W. HOLLOWAY JR., Director, Bureau of Legal Medicine and Legislation: Just prior to the Christmas recess congressional action was completed on two measures that are of particular interest to the medical profession. Both related to veterans. Completion was half-way had on another bill, the Hill-Burton hospital construction bill. The Servicemen's Readjustment Act, or the so-called G. I. Bill of Rights, was enacted in 1944 and has been in operation for about eighteen months. During that period a number of questions have arisen concerning the applicability of the provisions of title 2 of the law, which relates to educational benefits to the returning medical officer. These questions were given careful consideration by a subcommittee of the Committee on Postwar Medical Service, and many conferences were held in Washington with the officials of the Veterans Administration in an effort to obtain answers to these questions through administrative rulings.

When amendatory legislation was introduced in the late summer last year, this subcommittee filed with the Senate Committee on Finance a statement recommending four or five changes in the G. I. Bill of Rights in the interest of the returning medical officer. All of these changes have become effective. Three or four of them were incorporated into the law itself, and the other suggestions have been adopted through administrative ruling. Here is what the subcommittee recommended to the Senate Committee on Finance, and the action taken by the Congress on those recommendations:

The subcommittee recommended the removal of the requirement in the case of the medical officer over 25 years of age when he entered service that he prove that his education was interfered with in order to qualify for educational benefits beyond the one year period. This imposed quite a hardship on some of the returning medical officers, and while the attitude expressed in Washington indicated a liberal construction of this requirement, the medical officer was required to file his application with the regional officer of the Veterans Administration having jurisdiction, and there was a possibility of different constructions being made in different regional offices. Now the returning medical officer will be entitled to such educational benefits or a period of educational benefits commensurate with the time he served in the Army or Navy without regard to the age of the medical officer at the time he entered the service.

The subcommittee recommended that the government pay (in the case of a short refresher course) the tuition charged by the institution subject to the $500 limitation and not pro rate the fee as has been considered necessary under the original law. If a returned medical officer pursued such a course for eight weeks at a cost of $250, under the original law the government would not pay the $250 but would pay the proportion of $500 that eight weeks bore to an ordinary school year of thirty-two weeks, or would pay $125 and the medical officer would be required to pay the other $125. Public Law 268, which is the law that amended the G. I. Bill of Rights, provides that in the hypothetical case stated the government would pay the entire $250 and there would be charged against the veteran's period of eligibility the proportion of an ordinary school year which the cost of the short course bears to $500. Since the tuition in this case was $250, and since that is one half of $500, the medical officer will have used up one-half year of his period of eligibility and not merely the eight weeks during which he pursued his course. The subcommittee recommended that the educational benefits be made available to the veteran medical officer while on terminal leave. This was not possible under the original law because of the requirement that the veteran must be discharged or otherwise honorably separated from service before the benefits were available. The new law does provide that the benefits of title 2 and title 3, relating to education and to loans, are available to veterans on terminal leave, with the restriction that subsistence benefit allowances are not payable until the veteran has separated from the service. This amendment was made effective as of June 22, 1944, which was the date the original law was enacted. The fact that Congress did make this particular amendment retroactive constitutes, I think, a justification for an application by a medical officer for reimbursement of funds expended prior to the enactment of this law for refresher courses during a terminal leave period.

The subcommittee made two other recommendations which can be treated together. It recommended that accredited hospitals be specifically recognized in the law as being educational institutions and as such entitled to tuition payments, and that former medical officers pursuing residencies or internships be

considered as students and as such be entitled to the subsistence allowances. Prior to recent date there had been much uncertainty as to whether a hospital could be considered as an educational institution under the law and as to whether an intern or a resident could be considered as a student. These recommendations were not included in the new law, but, as indicated in a statement that was published in THE JOURNAL on January 26, they have been administratively determined in line with the recommendation of the subcommittee of the Committee on Postwar Medical Service. In brief, a hospital is considered as an educational institution; it may receive tuition payments, and a medical officer serving a residency or an internship in the hospital is considered as a student and is entitled to the subsistence allowance of $65 per month without dependents, or $90 per month if the veteran medical officer has dependents.

Another change in this new law not specifically recommended by the subcommittee permits a veteran to foreshorten his period of eligibility by having paid for him the cost of an educational course in excess of $500 for an ordinary school year. If he does so there will be charged against his period of eligibility the proportion of an ordinary school year which such excess bears to $500. Assume that a returned medical officer, for instance, has a two year period of eligibility. He desires a one year refresher course that will cost him $750. Prior to the recent amendatory law only $500 of the $750 could be paid by the government. Under the amendment the veteran may elect to have the government pay the entire $750, and his period of eligibility for benefits will be reduced not by one year but by one and one-half years.

The amendments that were made to title 3 of the G. I. Bill of Rights relating to loans were for the purpose of simplifying the procedures and extending the benefits. They are too detailed to discuss here. Briefly, 50 per cent of any loan made to a veteran for the purpose set forth in the law, within ten years after the termination of the war, may be automatically guaranteed by the Veterans Administration subject to the limitation that the amounts guaranteed may not exceed $2,000 in the case of a non-real estate loan, or $4,000 in the case of a real estate loan. As heretofore, the loans must be negotiated with a lending agency such as a local bank. No loans are made by the Veterans Administration itself; it only guarantees a part of them. Not more than 4 per cent interest may be charged on any guaranteed loan.

### VETERANS ADMINISTRATION

On January 3 the President approved Public Law 293, a bill establishing a Department of Medicine and Surgery in the Veterans Administration. Its provisions were analyzed in detail in THE JOURNAL, January 5. Its objective is to provide a better quality of medical care for veterans by offering a greater financial inducement to physicians to associate themselves with the Veterans Administration, by providing for the selection and retention of medical officers without regard to Civil Service requirements, by affording opportunities for medical officers to qualify as specialists with additional compensation and by affording opportunities for postgraduate residencies in veterans' hospitals. The general objectives of this law are admittedly meritorious.

The Hill-Burton hospital bill, which passed the Senate on December 11, is in substantially the same form in which it was reported by the Senate Committee on Education and Labor. It is now pending in the House Committee on Interstate and Foreign Commerce. In the report of the Senate Committee on Education and Labor, Senator Murray filed a reservation to the report of the full committee. He expressed the belief that the bill includes a bad and dangerous administrative arrangement in that it assigns certain essential administrative functions to the Federal Hospital Council; that it devolves too much authority on the states with respect to the use of federal funds. He urged that the federal regulatory power should be extended over the operation and maintenance of hospitals to be constructed under this program.

In reporting this bill to the Senate, the Senate committee suggested certain important changes in the original bill which were thereafter adopted by the Senate. Briefly, these changes were as follows:

The reported bill provides for a five year program and authorizes annual appropriations of 75 million dollars for each of the five years plus unappropriated and unexpended balances. The original bill suggested an appropriation of 100 million dollars for the first year and unlimited appropriation for an unlimited number of years thereafter.

Second, an authorization in the original bill of 5 million dollars for state administrative expenses was eliminated on the theory that the states should be able to handle this aspect of the program without federal aid.

Third, a formula was included for the allotment of federal funds which will tend to eliminate any administrative discretion in making allotments.

Fourth, the term "Public Health Service" was redefined to exclude any reference to medical care.

Fifth, in the original bill it was required that a state plan embody a construction program which would be in accordance with standards to be prescribed by the Surgeon General with the approval of the Federal Council. In the reported bill general requirements are specifically set out, and the federal government's regulatory control is limited to such general requirements. These requirements are laid, in the main, to the number and general manner of distribution of hospitals to be constructed under the program.

Sixth, a designation of the council on the federal level was changed from the Federal Advisory Council to the Federal Hospital Council, because in the opinion of the committee the functions of the council were not solely advisory.

Seventh, there was included in the bill, as recommended by representatives of the Association who participated in the Senate hearings, a provision denying to any federal officer or employee the right to exercise any supervision or control over the administration, personnel, maintenance or operation of any hospital with respect to which any federal funds are made available under this program.

When the bill was on the floor of the Senate, Senator Wagner and Senator Murray offered some six or seven amendments to cure what they thought were the bad features of the bill. One of these amendments would have denied to the Federal Hospital Council any functions whatever other than purely advisory. Another would have conferred on the Surgeon General jurisdiction over the maintenance and operation of the hospitals to be constructed. Still another would have assured that such hospitals could be utilized by all practitioners in the community in which they were located who were licensed to practice, and so on.

The principal support of these amendments came from Senator Murray and Senator Wagner, and all the amendments offered were rejected with the exception of one, and this amendment relates solely to the distribution of public health centers. In the bill as reported to the Senate, the provision was contained in it that the distribution of such centers shall not exceed one per 30,000 of population. Senator Murray suggested an amendment to this provision, as follows: ". . . except that in states having less than twelve persons per square mile, the distribution shall not exceed one per 20,000 population."

The lack of support that Senator Wagner and Senator Murray were able to get in this instance may possibly reflect the idea that the Senate as a whole does not find itself in agreement with the philosophies of these two senators. The bill now is before the House Committee on Interstate and Foreign Commerce, and hearings on it were scheduled for February 25.

### DISCUSSION

DR. JOSEPH S. LAWRENCE, Director, Washington Office, Council on Medical Service and Public Relations: A Senate joint resolution has been introduced by Senator Wayne Morse of Oregon. It provides that the Children's Bureau shall be given authority and money to do three things: First, make studies of the health and physical status of children of school ages; second, make studies of the facilities and services offered by schools for the correction of physical defects of school children of school ages; third, recommend the use of and

demonstrate in representative urban and rural areas methods of conducting school health examinations and provide school health services. I spoke with Senator Morris about the origin of the bill, and he said that the Children's Bureau of course knew about it, but he was particularly interested because a woman's league had given it to him. Women's organizations are the lively organizations at the present time in studying and advocating changes in our health program. I was invited to be present yesterday afternoon at a discussion before the League of Women Voters of Washington, D. C. They invited a doctor from the Department of Agriculture to represent one side of the question and me the other side. It was a round table discussion. I don't believe any convictions were made at the time, but I do think many of the women got a different idea of the health program generally, at least from their questions as the afternoon progressed, and when the meeting was over some of them came to me and indicated that they had obtained a different idea of the whole situation. However, I believe that many of them were wives of government employees, and after all they would vote today for a government system of medicine. Senator Pepper, on his return from a tour around the world, or rather a tour to the Far East and the war areas, stopped for quite a while in England and talked with Beveridge. He is persuaded, I am told, that we should have some kind of system that follows the lines set out by Beveridge; that is, we ought not any longer have our welfare and social security and various items scattered, but they should be united in one system, one government administrative group. He believes that the Beveridge scope is not too large. I am told, however, that he does not endorse the Beveridge plan 100 per cent; he feels that we can work out something different for ourselves.

DR. HENRY A. DAVIDSON, Trenton, N. J.: Mr. Holloway, with reference to the acceptability of osteopaths in the medical department of the Veterans Administration, do you know whether General Bradley in fact intends not to appoint osteopaths or whether indeed he has any choice in the matter? Is he going to let the clause remain in the bill and not appoint osteopaths?

MR. HOLLOWAY: It is my understanding that it is permissive and not mandatory.

DR. DAVIDSON: There is no provision, as it is now set up, for the osteopathic organizations to insist that they have an absolute right in such appointments?

MR. HOLLOWAY: Not under this law.

DR. CARL B. DRAKE, St. Paul: I should like to ask for a little information with regard to the public health centers. I am from a city and do not know what the views of country practitioners are, particularly, but I have an idea that many of them need (in the way of hospitals in sparsely scattered districts) places where they can take emergency operations, for instance, and fractures and obstetric cases. I understand this bill is going to be limited to public health centers. Can any one tell me just what a public health center will include in its activities?

MR. HOLLOWAY: They exclude medical care.

DR. SENSENICH: There was much discussion of the bill in the Senate, and there was much objection to giving blanket authority for all kinds of treatment centers, the idea being that a treatment center, with an x-ray and small laboratory equipment, would tend in many instances to stimulate or rather encourage doctors to do things for which they probably were not competent. In connection with the Hospital Association, no objection was made to those centers provided they were extension departments or an extended outpatient department, rather, of some existing medical center, where obviously there would be a trained roentgenologist and trained laboratory worker. Finally the discussion swung about to where it was thought better to exclude it entirely with the idea that, if the program went through with sufficient money to create facilities in the way of hospitals, probably it would not be too difficult to arrange so that those services were possible in the hospitals, and they would not be too far away to deal with and to provide facilities for the proper care of patients who needed special service; it would be better to confine those units to educational and public health work.

MR. HOLLOWAY: Dr. Sensenich, wasn't it also suggested by the Senate Committee on Education and Labor, in its report, that the functions of these health centers would be determined on a state level by the state law?

DR. SENSENICH: That is right.

MR. HOLLOWAY: And would not be provided in the federal law. So, what the activity can be, carried on in a public health center, would be determined by the law in the state in which it operates.

### Plans for Medical Care in Rural Areas

DR. F. S. CROCKETT, Chairman of the Committee on Rural Medical Service of the American Medical Association: The Committee on Rural Medical Service is one of the more recent efforts of the Board of Trustees to do something of a constructive nature, if possible, for the help of people in rural areas. The one million members of the American Farm Bureau through its auxiliary, the Associated Women of the American Farm Bureau Federation, has been interested in rural medical service for a number of years. Several years ago they appointed a Committee on Rural Health to study the problem of medical care created by the reluctance of young physicians to locate in smaller towns and villages. This, together with the advancing age of the doctors remaining, has created deep concern among the farmers. The American Medical Association was invited by them to assist in the study and solution of the problem. The Board of Trustees appointed a Committee on Rural Medical Service. We had our first meeting last July. We learned that the bureau was opposed to compulsory legislation such as the Wagner-Murray-Dingell bill; however, they recognized that a need existed in many rural areas and feared that there would be federal legislation if something could not be done by themselves as consumers, with the help of the medical profession. Since this is really a community problem multiplied several hundred times, it was apparent that it could not be solved on a national level by either the Farm Bureau or the American Medical Association. We found that the Farm Bureau was organized very much as we in the American Medical Association are organized: If anything was to be done it must be done by the state and county bureaus, as we must act through our state and county societies. It was decided to ask the state societies of medicine to form rural health committees to meet with like committees of the state Farm Bureaus, these committees to confer and organize the counties as and when needed. On our part, a letter was sent to the secretary of each state reporting the conference and the plan. To date some nineteen states have appointed committees or designated some existing committee, and seven states have announced their intention to comply. This project is a full time job for any committee alive to the possibilities inherent in this plan.

Much of the agitation in Congress about the paucity of medical attention arises from the absence of doctors in rural areas. This is not a local condition, in that it exists in practically all the states of the Union. Hence the broad appeal to nearly all legislators who have a rural constituency. If we can show to these congressmen and these senators that an earnest effort is being made to help these communities, much of the immediate heat will be cooled. We all know that doctors cannot be assigned to these places. We also recognize that an opportunity to earn a reasonable living amid satisfactory social surroundings are two of the important factors. Granting that these conditions are met, what can be done to attract well qualified physicians, especially recent graduates, to practice in these communities, often at some distance from a well equipped hospital?

The Hill-Burton bill is generally expected to pass. This bill is expected to provide certain kinds of facilities, especially helpful in rural areas, and it is with that idea in mind that the Farm Bureau has been supporting it. It is at this point that state and county committees, together with their Farm Bureau counterparts, can be of great value in making the Hill-Burton bill solve a really local need rather than a political objective. The unit of population to be served, the unit of mileage to be covered and the type of facility best suited to each community when viewed individually in relation to its professional per-

sonnel and when seen as a part of a larger group about a well equipped hospital—all these must be determined and tailored to meet the needs of each locality and larger area, and who can better do that than the local medical profession and the state medical profession together with the farm bureaus of comparable areas?

The term "diagnostic or health center" has not been defined. It is an elastic term. It may mean housing for doctors and dentists, public health officers, laboratory and x-ray equipment. Down in Georgia they assume in their survey that this is to be the definition of a health center. They also suggested that in certain instances adding emergency beds for accident and obstetric cases might be desirable, on the basis of 1 or 1½ beds per thousand of population. All of these might be very helpful to the well trained physician, and its presence in the community would promise much needed diagnostic aid to those adequately trained. If facilities are to be placed here and there through the operation of the Hill-Burton bill, some provision must be devised to maintain a high standard of usage, and I think that is another point in which we must all be very much concerned.

Our recognized hospitals submit to inspection and regulation by the American Medical Association through its Council on Medical Education and Hospitals, resulting in a higher standard of medical care. The benefits of this practice might be extended to the diagnostic centers at a distance if they could be made an outpatient responsibility of the hospital center of the area.

The chairman of this committee made two trips to Washington, one last September, to confer with representatives of the Dairy Cooperatives, representing some 350,000 milk producers in some forty-two states. Following this conference their board of directors adopted a policy opposed to compulsory types of legislation.

If we are to secure for our rural areas the fullest benefit from the Hill-Burton bill, we must have active committees in every state having rural areas with health problems. Now, before the bill becomes law, liaison must be established with interested farm groups, probably from the Farm Bureau. Agreement should be sought covering procedure, contact with the government or the responsible state agency in support of sound administration, preliminary surveys, and the whole thing blueprinted to your satisfaction. In March 1944, just a year ago, the Farm Foundation sponsored a meeting of the Farm Bureau, the Grange and the Farmers Union, assisted by many representatives of the United States Public Health Service, the Department of Agriculture, several colleges of agriculture and other interested individuals. A comprehensive survey of health needs all over the rural part of America was made. Last September this committee met at the Farm Foundation again with representatives of the Farm Bureau, the Grange and the Farmers Union. It seems that they have a national committee composed of representatives of these farm groups, who consider rural health problems, and it was with that group that your committee met to discuss the fourteen point program as it affected farmers. All this is related to you to show you the interest that the farmers themselves have in their own farm health programs.

In July 1945 was held the first conference for county leaders on medical care, health service and facilities in Ohio. This was an interesting conference. It was held at the Ohio State University, but the value of conferences of this kind results from the fact that there has been a good deal of preliminary groundwork done through the extension department, and in this case the Farm Foundation had helped to finance some one to make a special survey of the farm situation in the three general sections of Ohio.

The value of conferences such as this lies in the meeting of farmers with leading public health workers, dentists and leaders of the extension services of the agricultural colleges, resulting in a better understanding of the many economic, housing and social conditions that must be solved in attracting the right kind of doctors to where they are most needed and under conditions where they can do the most good. State committees within your state medical societies on rural medical service could initiate like conferences in other land grant colleges, and I am anxious that that be studied as to one of the things which could be done this year on a wide basis. Some states have already done much in surveying their health needs.

Last summer the state of Georgia published a most interesting survey of rural and urban health needs and facilities. The public health program was prepared by the Health Panel of the Agricultural Industrial Development Board of Georgia. It covered the period 1940 to 1944. The economic condition, the social factors involved and existing facilities were surveyed both in rural and in urban communities. The entire state was covered, and based on that most comprehensive study they made some definite recommendations.

I have just received this copy from Virginia. They have just published a report of their Advisory Legislative Council on medical facilities available in rural areas of the state. They have followed through with the same general idea which I hope all our states are doing and which the rural medical service committees of our states could be helpful in initiating, if they will. Shortage of professional personnel was found greatest in rural areas. Six counties had no active physicians at all in Virginia, and fourteen counties had only one physician to 6,000 or more of population. The remedy suggested including placing facilities for diagnostic and health purposes at strategic points for the use of physicians and public health services; also a large loan fund for rural youth in obtaining a medical education granted on a pledge to practice for a time in rural communities was made. The latter point has been tried a number of times with more or less success, many times without accomplishing much good, but it still has its possibilities, and in Virginia they are going to give it another try.

We should like to have a round table conference some time, probably the first week in April, at which chairmen or members of these rural committees from the states would come in and we could get members of the Farm Bureau committees to attend and see what can be done in such a conference to make effective this sort of effort. It is easy for committees on national levels to meet, to draw resolutions, to affirm general principles, to go home and meet in another year. If this committee is to be of any service to you, to the profession and to rural America, we must have active committees in the states; we must give them jobs and work to do, which we are planning to get busy on now; and from that we must get down to the county level where the actual information many times must be obtained to complete the job.

DISCUSSION

DR. VICTOR JOHNSON, Secretary, Council on Medical Education and Hospitals: These farm groups are vitally interested in collaborating with the medical profession, in meeting the problems of rural medical care. This job cannot be done on a national level. This educational process has to be carried to the grass roots, to the farmer himself, and that must be done through local organizations, through your own committees collaborating with the local committees in the states. The necessity for this can be exemplified by an experience in Virginia, where the Hospital Service Plan conducted a number of surveys, one of them in Craig County, which was selected as an ideal county to enroll farmers and other rural inhabitants into the Hospital Insurance Plan. It was found that 95 per cent of the families did their banking in two banks in one of the cities of the county. It was decided to conduct this campaign through the banks. The banks were to deduct the premiums from the bank accounts of the farmers. They expected that of the 950 families in this ideal county perhaps 500 would enroll. There was a rather high pressure campaign, using that term in the better sense of the word, a well organized campaign to enroll these families. They got not 500 families but 75 families. They set about analyzing why this failure occurred. They decided there were three major factors in that community: In the first place the farmers are not used to having things deducted either from their incomes or from their bank accounts, as is true in the case of urban population. Second, farmers take a little longer to make up their minds. They want to think things over a little longer than some of the other people with whom we are used to dealing. Third, they are not as used to the employment of hospitals in times of illness as is true of urban populations. All of these points are matters of education of the individual farmer, which must be carried out on the basis of local educational organizations.

DR. CROCKETT mentioned that the Farm Bureau has a membership of one million. Actually the individual membership is something like four times that, because the membership of one million represents family memberships, and on the average in these memberships there are about four individuals per family. Therefore we are dealing with a potent and vocal and powerful cross section of the farm population.

CHAIRMAN BARKER: I realize that many of you come from more rural or agricultural states than I do, but I think farmers are the same almost everywhere. I imagine the farmer adjusts himself to his environment and gets along pretty well. I am not a bit surprised about the seventy-five families taking the hospital plan. They are pretty independent fellows.

DR. SENSENICH: Has any thought been given to the idea of central hospitals at selected spots and the giving of some sort of transportation or ambulance service, or otherwise, with the idea of concentrating the ill some place where they can be given good service? I am wondering if it is practical, or whether any thought has been given to utilizing the Hill-Burton bill or some other means of financing locally, if possible, the establishment of facilities at proper points and then providing some kind of transportation for people who are ill.

DR. ARTHUR J. OFFERMAN, Omaha: I am a member of the Nebraska Blue Cross and president of the Nebraska Surgical Plan. We think we are getting some of the rural problems in Nebraska. In western Nebraska, in the small town of Morrow, with about 800 population, we estimated that there were about 200 families. We started a campaign to enroll this small country town in our hospital plan. The campaign was carried on through community effort. In about two weeks we were successful in enrolling about 160 of the 200 families. We thought we were quite successful in doing that. Probably in eight or twelve months we will go back and try to enroll them in our prepayment plan for maternity and surgical care. In the fifteen months we have been in operation we have been successful in enrolling twenty truly rural groups. These rural groups consist of school districts and extension clubs and project clubs. We think the average enrolment in these rural groups amounts to about forty people in each group. Our field director has been active in this, and we think it is due to his single efforts that we have been able to get to the rural groups at all. We have a lot of wide open spaces in western Nebraska, and I have talked with many men in the general practice of medicine, men who are practicing medicine and surgery and obstetrics. I have asked them "What is your experience? How are you doing it? What about maternity care?" More and more of those men are working about hospitals. Even though they are situated 20 or 30 miles from a hospital they are doing most of their maternity work in the hospital. I asked them how they do it. They said "Our roads for the most part are pretty good. They are all surfaced, year round highways, and 35 miles means thirty-five or forty minutes at the most." Many of us live in the city and drive for twenty minutes to make a friendly visit, so twenty minutes farther isn't any great extension of effort. There is an increase in the use of hospitals for all types of care. In my own city of Omaha there were about 5,000 babies born last year, and 4,500 of them were born in hospitals. I think in the rural areas, in the smaller cities and smaller towns, there is great utilization of hospitals. The hospital situation is difficult; there are not enough beds; there is the constant difficulty of getting a patient admitted.

DR. D. G. EDMUNDS, Salt Lake City: Speaking for Utah, may I say that the population more or less follows the main lines of either railroad or automobile transportation. Probably the southeastern part of the state would suffer most. It is sparsely settled, and maybe 75 miles at the most would have to be driven over fairly good roads to reach a hospital; otherwise the country hospitals have been sponsored either by the community or by individuals and are fairly well set up. The state medical association has been studying this question, but we have not taken a particularly active part up to this time, although we intend to. In Utah the Mormon Church is predominant, and the presiding bishops have indicated that they are going to set up rural hospitals on the basis that if the community will put up 50 per cent the church will supply the other 50 per cent. That would make hospitals (the sites of all of which have been selected) available to practically all the rural places in Utah. In any state of that type there are farmers, ranchers and so on who have no telephones or who drive over roads that are pretty bad; but they would be in the minority. On the whole we are pretty well supplied, or will be, with the plans now under way. Regardless of whether the Hill-Burton bill passes or not, we are opposed to federal aid. We feel that it is not necessary and that we can get along very well without much of it.

DR. SENSENICH: Doctor, does it bring the costs down when they do not have great mileage to pay, or is that a factor? The complaint is made that the people who live distances away have to pay so much to have a physician come to see them. I wonder, if they were transported to a hospital, whether it would make very much difference.

DR. EDMUNDS: It would. If a doctor makes a 70 mile trip and charges his mileage plus his fee, naturally it does cost something in an individual case. When it comes to transporting and when the roads are good for driving, there is no reason in the world why almost any one cannot reach a hospital within a comparatively short time. I think it would be from twenty to forty-five minutes at the most, except in the southeastern corner of the state.

DR. SENSENICH: Is there any ambulance service as a community service or organization service?

DR. EDMUNDS: Not unless it is some little local place that has organized an ambulance of its own; but that is not general yet. I do not feel that this rural fear of medical care is going to be great, at least not in our state. We cannot have a medical society in every county; sometimes there will be five counties that will make up one medical unit. Of course there are some sparsely settled areas that may suffer.

DR. SENSENICH: What is the attitude of your local authorities in connection with the indigent under those circumstances? Do they have difficulty being admitted to hospitals for care? Is that an argument to be used against it?

DR. EDMUNDS: If this feeling against federal aid is sponsored as it is going to be, and the hospitals have already planned on it through the Mormon Church in the communities, they are going to have more trouble entering and seeking care, whether they are Mormons or not.

MR. JOHN HUNTON, San Francisco: California is far enough west to qualify under your request, Dr. Sensenich. We have had this problem of trying to cover the rural residents with a prepayment plan. We decided finally that the best method was to work through one or another of the farm organizations. We have three large groups, the Associated Farmers, which is comparable to the Farmers Union in some other cities, we have the Farm Bureau Federation, and we have the State Grange. The State Grange in many places constitutes more or less a social gathering, but it happens to be a rather active organization in California, with about 30,000 farm families as members. Right now we are working with the State Grange to sign a contract with the California Physicians' Service for complete care, under a regular California Physicians' Service contract, for all those 30,000 families, with the State Grange acting as the selling and collecting agency, the California Physicians' Service putting out the promotional material and working with the State Grange and enrolling the groups in their various centers. That thing has not yet been developed fully, and the State Grange has asked for several concessions which are not quite along our line of thinking; but we are working amicably with them and we hope that within another sixty days we shall have a contract signed with that group to take care of 30,000 families. From that beginning we hope to be able to make a break into the Farm Bureau Federation, into the Associated Farmers and into the various cooperatives, which, as you know, not only form a rather tight group in themselves but which also are handling the money of their members and are in an ideal position to make the collections under any prepayment plan.

DR. EDMUNDS: I should have added that the Blue Cross came in there a year ago and already has signed up 27,000 members. It is going well through that locality. The state

of Utah will soon have a surgical plan, and it is expected that the Blue Cross will sell it in connection with its hospital service.

MR. C. S. NELSON, Columbus, Ohio: We find too frequently that some farm people want cheap medical care instead of health, and they have to be told that they cannot have health with cheap medical care. It is a question of improving the economic conditions, the health departments, better facilities, better living conditions and so on; and they also realize that they have the problem on their hands of keeping their own children on the farm. The population figures will show that. It is difficult to get a young physician whose wife and he were born in a city to move into a rural area, largely because of certain social and economic conditions. If we can point out their responsibilities to them and then try to do the things we can do, we shall arrive at a common ground. That is exactly what we have done in Ohio. I think the greatest difference in Ohio at the present time is largely on the question of the cost of the financing. It is a substantial group in Ohio who believe in consumer cooperatives. We do not. If we can work out some plan to finance and distribute medical care, the other problems will be met. They realize that they have a definite responsibility too along with us.

MR. H. T. SETHMAN, Denver: In Colorado we have three counties or areas which we refer to as Parks—North, Middle and South. These parks are so located that they have a mountain range, you might say, between them. The population of one of those areas is perhaps 2,000, another around 3,000 and the third about 1,500. At present we have three physicians in the one county. The area extends probably 70 miles in length. The areas are broken up with mountain ranges running between them. The population follows a stream, and the branches are established along that stream. They extend probably for 40 miles up in my direction. The roads in these areas, except for a main highway that extends through the areas, are poor. They are passable in the summer, but most of them are snowed up in the winter. In the past few years we have had some progress made in getting service plows to clear some of the roads so the people could get to the highway or into a nearby city or to their nearby ranches, but that is only on the rare occasion when some one is sick. Then you take a week off to get the county commissioners to decide to plow the fellow out so the doctor can get to him. The question of how adequate the physicians' supply is resolves itself like this: Say a physician has a call to Breckinridge, 70 miles away. He can't make many such calls in twenty-four hours. Many people, of course, get sick at night. When a storm is raging, the physician drives as far as he can in his automobile, then he gets into a feed sled which takes him 6 miles farther, and then another sled takes him the rest of the way. What are you going to do about it? Are you going to have sufficient physicians for every family, or are you going to solve it more by having the economic situation remedied so that these people can get into the towns? It isn't a matter of distance. We have provided hospitalization for these people in good hospitals, not in our own community. The hospital proposition is not so difficult if you can get to the ill in an automobile, provided they are sick enough to go to a hospital; then you can get them there. Many of the obstetric cases are done in the homes in those areas, but the folks have been educated to the fact that it is preferable for them to go to a hospital. Hospital facilities are being taxed in our state generally, and in our hospital centers space is not too available at all times. Of course, the women make arrangements somehow or other either to get to the hospital or to be taken care of at home. As far as rural ambulance service is concerned, that is not such a big problem. Few of the people do not own automobiles, and by making certain arrangements in any auto, other than a coupé, you can easily and comfortably transport a patient to the hospital. The county commissioners like to overlook these facts because it would mean a little more expense to build roads into these areas so that the people could get in and out. I don't know how that problem is going to be solved. If there was a hospital center in an area and you had the personnel to make it a good, serviceable center, how would that hospital operate under the conditions we have to face now? The patients can't get to it. Frequently the passes are closed between the areas because of snow. The pass was closed just before I left, except at the one main pass, and snowslides many times keep one from getting through in a car; however, we do have to tunnel into Denver to get through, sometimes. Even if adequate hospital service was supplied, if the people living in that community were taxed or requested to pay so much to support it, I don't believe they would want it. People from one area cannot get into the other.

As far as getting physicians into those communities is concerned, I think the largest town in any one of these areas has a population of around 400 people. There are just so many physicians who can make a living in that area. It is my opinion that any of the young physicians who would choose a place like that, where they could barely make a living, probably would not represent the quality of men they should be for the kind of care we are talking about.

DR. A. J. BOWLES, Seattle: In the state of Washington in the last legislature a bill was passed to raise money to establish hospitals in communities sparsely settled, which helped to settle the hospital problem to a certain extent. We have a man in Washington by the name of Shadid who, I believe, came from Oklahoma. He is establishing hospitals, selling the farmers at the rate of $100 a share, and sponsoring the hospital he plans to build. He is going to hire a big staff of doctors to staff the hospital. As a state bureau we are attempting and at the present time are taking small groups of a Grange, 1,500 in certain areas, and are giving them full coverage for hospital care, medical care, and so on, not taking the whole state at once, so we can get some idea of what it is going to cost us. I believe that we shall get to help these farmers.

*(To be continued)*

# Medical Legislation

## MEDICAL BILLS IN CONGRESS

### Disease Prevention

Senator Pepper, Florida, has introduced S. 1875, to authorize the President to mobilize at some convenient place in the United States an adequate number of the world's outstanding experts in an effort to discover means of curing and preventing cancer. An appropriation of $100,000,000 will be authorized to enable the President to carry out the provisions of the bill. A companion bill introduced by Representative Neely, West Virginia, H. R. 4502, is pending in the House.

Senator Langer, North Dakota, has introduced three bills relating to the prevention of disease, S. 1883, S. 1888 and S. 1891. These bills, respectively, propose each an appropriation of $3,750,000,000 (1) for use by the Public Health Service to promote programs for the prevention, diagnosis and treatment of cancer, (2) for disbursement to Sister Elizabeth Kenny for use in establishing and maintaining facilities for the hospitalization and treatment of persons suffering from infantile paralysis, and for investigation and research with respect to the origin, causes and means of control of the disease, and (3) for use by the Surgeon General of the Public Health Service to provide the means for securing a specimen of the urine of each person in the United States and the examination and analysis of such specimen, a report to be made to the health authorities of the municipality or the county wherein the person resides if the examination and analysis disclose the existence of some disease.

### Physically Handicapped Persons

Senator Radcliffe, Maryland, has introduced S. 1865, directing the Secretary of Commerce, through the Bureau of the Census, (1) to make a survey of the population of the United States to determine, as far as possible, the number, age and location of physically handicapped persons; (2) to prepare and submit to the President and to Congress a preliminary statement outlining plans for conducting the survey and for classifying citizens found to be physically disabled; and (3) to report to Congress within twelve months the results of the survey. A physically handicapped person is defined as any citizen who,

because of (1) congenital deformity, (2) injury or (3) disease, is substantially handicapped in obtaining employment or in self employment.

### Hospital Construction

Representative Priest, Tennessee, has introduced H. R. 5628, a bill to amend the Public Health Service Act, to authorize grants to the states for surveying their hospitals and public health centers and for planning construction of additional facilities, and to authorize grants to assist in such construction.

### Miscellaneous

H. R. 5645, introduced by Representative Flannagan, Virginia, proposes to enact a Federal Insecticide, Fungicide and Rodenticide Act. This bill would regulate the marketing of economic poisons defined to include any substance or mixture of substances intended for preventing, destroying, repelling or mitigating any insects, rodents, fungi, weeds and other forms of plant or animal life or viruses, except viruses on or in living man or other animals.

The bill proposing to establish an optometry corps in the medical department of the United States Army, H. R. 3755, has been reported, with amendments, by the Senate Committee on Military Affairs. It passed the House Sept. 18, 1945.

Congressional action has been completed on H. R. 2348 to bring within the purview of the federal narcotic laws any drug, as defined in the Federal Food, Drug and Cosmetic Act, found by the Secretary of the Treasury to have an addiction-forming or addiction-sustaining liability similar to morphine or cocaine and proclaimed by the President to have been so found by the Secretary.

Hearings on S. 1160, a bill to establish a National Neuropsychiatric Institute, have been scheduled for March 6, 7 and 8 before the Subcommittee on Health and Education of the Senate Committee on Education and Labor.

## STATE LEGISLATION

### California

*Bill Enacted.*—S. C. R. 16-X has become resolution chapter No. 46 of the Laws of 1945. It is a resolution requesting the state director of finance to appropriate $44,000 for the purpose of carrying out a 1945 law providing for the better protection of the public health by state licensing, inspecting, regulating and supervising of public and private hospitals.

## MASSACHUSETTS

*Bills Introduced.*—H. 1209 proposes the establishment of a cash sickness compensation fund to be administered by the Massachusetts division of unemployment security. H. 1217, to amend the law relating to the taxation of educational institutions, proposes to eliminate the property of such institutions from the exemption provisions if the institution discriminates against applicants for admission thereto because of their race, color, religious creed, national origin or ancestry. H. 1365 proposes the establishment of a Veterans' Medical Relief Fund to be used for the payment of "all medical bills at any time contracted by any veteran of World War II . . . who shall have been discharged from any of the armed forces of the United States under conditions other than dishonorable, whether such bills are for services rendered to said veteran or to such members of his family as he is under any legal obligation to care for and support" up to a sum not stated in the bill. H. 1397 proposes to require persons working in restaurants, bakeries, stores, bars, etc. to submit to and undergo a physical examination as to whether or not said person has tuberculosis or any other communicable disease which might endanger any person he or she may come in contact with, the examination to be made at least twice a year. H. 1398 proposes the establishment of an eye bank in the Massachusetts General Hospital for sight restoration, to collect and preserve healthy corneal tissue from human eyes for transplanting to blind persons who have lost their sight because of corneal defects.

### Michigan

*Bills Enacted.*—H. 13-X was approved February 18. It authorizes the approval of a postwar emergency hospital program for the construction and equipment of a number of hospitals for mentally affected persons. S. 18-X has become chapter 27 of the Laws of 1946. It provides that persons released from the armed forces who had, prior to their induction, been undergoing training for a trade, occupation or profession shall be entitled to license or qualification under the provisions of the laws covering their qualifications or licensing in force at the time of their entrance into the armed forces. Periods of training and practical experience in the armed forces may be accepted by any board of examiners in lieu of the required period.

### Mississippi

*Bills Introduced.*—H. 430 proposes the creation of a Mississippi commission on hospital care to set up and administer a statewide plan for the construction, equipping and maintenance of hospitals, nurses' homes, health centers, clinics and related facilities and in conjunction therewith to prepare a statewide hospital plan and to conduct all necessary studies and surveys incident to developing such a statewide hospital plan. S. 221 proposes to require all teachers in the elementary and high schools of the state and all other state employees who work directly with children to submit annually to an examination for tuberculosis, including an x-ray analysis, by a competent physician or by the state health department.

### Missouri

*Bills Introduced.*—S. 424 proposes to transfer to the State Board of Medical Examiners certain powers and duties heretofore vested in the State Board of Health. S. 431 proposes to transfer to the State Board of Cosmetology certain powers and duties heretofore vested in the State Board of Health. S. 432 proposes the creation of a State Board of Chiropody and the assumption by such board of powers and duties heretofore vested in the State Board of Health. S. 433 proposes to transfer to the State Board of Chiropody certain powers relating to licensing and registration of practitioners heretofore vested in the State Board of Health. S. 434, relating to the licensing of midwives, proposes to transfer to the division of registration and examination of the state department of education certain powers heretofore vested in the State Department of Health. S. 435, relating to the licensing of chiropractors, proposes to transfer to the executive secretary of the division of registration and examination of the state department of education certain powers heretofore vested in the State Board of Chiropractic.

### New Jersey

*Bills Introduced.*—A. 133 proposes to prohibit all state boards, commissions and agencies and the board of education from discriminating in any way between ocular practitioners. A. 147 proposes that the holder of a license to practice a profession, the license or registration certificate of which was forfeited or lapsed because of the passage of time while the holder thereof was in the armed forces, shall be entitled, without examination or reexamination, within six months after his discharge, to a renewal or reinstatement of such license on payment of the lawful fee. A. 164, to amend the medical practice act, proposes an addition to the Board of Medical Examiners of a chiropodist to have equal rights and privileges in all matters affecting chiropody. A. 208 proposes the enactment of a completely new workmen's compensation law and repeal of the existing law. A. 219, to amend the law relating to the practice of optometry, proposes to make it unlawful for an optometrist licensed under the provisions of this law to engage in the practice of optometry with any corporation, organization, group or lay individual. A. 246, to amend the law relating to the practice of pharmacy, proposes to limit the terms "pharmacy" and "drug store" to a business conducted in its entirety as a pharmacy or drug store properly identified as such by signs on the outside of the premises in which the majority of the gross business carried on consists of professional services which may include the sale at retail of drugs, medicines, poisons, chemicals, medicinal vitamins and medicinal vitamin products, hormones, serums, antitoxins, biologicals, pharmaceuticals, insecticides, disinfectants, sickroom and hospital supplies and surgical appliances. A. 383, relating to workmen's compensation, proposes that whenever a physician, surgeon or hospital shall render or furnish medical or hospital service to an employee it shall be the duty of the employer and the insurance carrier, if any, to obtain from the physician, surgeon or hospital a detailed report in writing of

the medical history of the employee and of the examination and treatment of the employee, including the findings, diagnosis, estimates, prognoses and treatments advised and given.

### New York

*Bills Introduced.*—A. 1563 and S. 1469 propose to require the inoculation of all dogs against rabies. A. 1595 and S. 1411 propose the creation of a medical director in the county of Erie who shall be a duly qualified practitioner of medicine and surgery, be a graduate of a medical school and have had at least five years' actual experience in the practice of his profession. He would take over the duties now vested in the medical examiner. A. 1647 and S. 1380, to amend the law relating to divorce, propose to authorize reports of physicians to be received in evidence without the personal appearance of the physicians themselves, where insanity is in issue. A. 1690 and S. 1492, to amend the public health law, propose that no newborn child shall be released from a hospital until a chest x-ray examination particularly of the thymus gland of such child has been taken. The results of such examination must be communicated to the parents of the child. A. 1692 is the same as S. 1354, previously reported. To amend the law relating to nonprofit medical and hospital service corporations, it proposes to authorize the creation of dental expense indemnity service plans. Dental expense indemnity would consist in reimbursement for dental care provided through duly licensed dentists and in furnishing necessary appliances, drugs, medicines and supplies, prosthetic appliances, orthodontic appliances, precious metal and ceramic restorations. A. 1777, to amend the education law, proposes that applicants meeting the preliminary and professional educational requirements of the medical practice act, who present evidence that they have earned a medical student qualifying certificate in accordance with the rules of the department and have served at least one year as a member of a medical corps, detachment or other medical unit of the armed forces of the United States during World War II and were honorably discharged from such service, shall receive and be entitled to receive a license to practice medicine without examination. A. 1811, to amend the hospital lien law, proposes to limit the amount of the lien of a hospital to 15 per cent of the amount recovered by the patient. This limitation, however, would not prohibit the hospital from maintaining legal proceedings to recover the excess. A. 1854, to amend the education law, proposes to prohibit persons licensed to practice optometry from fitting contact lenses into the human eye except under the supervision of a duly licensed physician. A. 2061, to amend the law relating to the labeling of products containing poisonous substances, proposes to prohibit the sale of the following articles unless the container is labeled showing the percentage of the enumerated substances contained therein: aniline antimony, benzene, benzol, cyanogen, ethylene, hydrochloric acid, hallowax, hydrofluoric acid, lead, mercury, nitric acid, phenol, pitch and tar, tetrachlorethane, trichlorethylene, toluol and xyluol. S. 1319 is the same as A. 1167, previously reported. To amend the law relating to hypnotic and somnifacient drugs, it would prohibit prescriptions therefor from being refilled if the prescription bears a direction to that effect. The proposal would further authorize the prescribers to indicate the number of times a prescription may be refilled. If the prescription is silent as to the refilling, then the prescription may be refilled by the pharmacist during a period of not more than six months from the original date of the prescription. A pharmacist would be prohibited from furnishing a copy of the prescription to the patient. S. 1453, to amend the social welfare law, proposes to extend for one year the provisions authorizing emergency service by physicians who are public officers or employees. S. 1520, to amend the workmen's compensation law, proposes to authorize such physician or physicians as an employee or carrier may select and pay for to participate in an examination if the employee or carrier so requests. S. 1563 proposes the creation of a board of examiners in ophthalmic dispensing.

### Rhode Island

*Bill Introduced.*—H. 700, to amend the law relating to the sale of drugs and poisons, proposes that prescriptions for barbital or other hypnotic or somnifacient drugs shall not be refilled or compounded without a written prescription by a duly licensed physician, dentist or veterinarian for each and every refilling.

*Bill Enacted.*—H. 575 was approved Feb. 20, 1946. It creates a special committee to study the several problems arising out of the administration of the cash sickness compensation act and to make recommendations for amendments thereto.

### Virginia

*Bills Introduced.*—H. 211 proposes the enactment of a hospital licensing and inspecting law. "Hospital" is defined to mean any institution, place, building or agency by or in which facilities for any accommodation are maintained, furnished, conducted, operated or offered for the hospitalization of two or more nonrelated mentally or physically sick or injured persons, or for the care of two or more nonrelated persons requiring or receiving medical or nursing attention or service as chronics, convalescents, aged, disabled or crippled including, but not to exclusion of other particular kinds with varying nomenclature or designation, ordinary hospitals, sanatoriums, rest homes, nursing homes, infirmaries and other related institutions, and undertakings, exclusive of maternity hospitals, to the extent that the same are included within the scope of existing laws. H. 257 proposes that any person who has tuberculosis in a communicable form who, after having been instructed in writing by the local board of health, department of health or health officer or superintendent of any sanatorium of the state to take precautions to protect the members of his household and the public from being infected by tuberculosis communicated by such person, wilfully refuses to follow such instructions shall be guilty of a misdemeanor. H. 289 proposes to require persons dealing in the handling and processing of food for human consumption to submit each six months a certificate from a physician duly licensed for that purpose by the State Board of Health, certifying that such person has been examined and found free from any contagious or infectious disease. H. 303 proposes an appropriation to the department of health for the construction of six health centers in such areas of the state as will most benefit thereby. H. 363 proposes the establishment of a sanatorium for the treatment and rehabilitation of alcoholics. H. 376 proposes the creation of a commission on planning for the state hospital and health center system, the commission to make a hospital and health center survey covering the entire state for the purpose of recommending plans for the establishment and operation of a correlated hospital and health center system. H. 378 proposes regulations for the creation of local hospital or health center commissions. S. J. R. 20 proposes the creation of a commission to make a thorough and complete study of problems related to hospital and medical care, including the need of hospitals and health centers in the state, adequate plans for the prepayment of hospital and medical care for all classes of citizens, with due emphasis on the special needs of rural people, and other items related to the health and medical care of the citizens of the state. S. 164, to amend the law relating to the practice of chiropractic and naturopathy, proposes that any practitioner temporarily licensed, as provided by law, shall be issued a license to practice in his respective branch of the healing arts in Virginia, and such license shall continue in force and effect until suspended or revoked for cause. S. 184 proposes an appropriation to the Virginia Health and Medical Care Council for the purpose of promoting, furthering and fostering better health and medical care throughout the state. S. 226 proposes to authorize the Department of Health to aid in the construction of not more than six health centers in various areas in the state. S. 227 proposes to authorize bodies to be exhumed and autopsies held thereon under certain circumstances. S. 237 proposes the creation of an examining board for the certification of clinical psychologists.

*Bills Passed.*—S. 72 passed the house February 19. It proposes to authorize the state board of public welfare to provide reasonable rules and regulations for the construction, maintenance and operation of boarding homes, homes for the aged and other similar homes, the word "home" meaning "any place, establishment or institution operated or maintained for the maintenance or care of two or more aged, infirm, chronically ill or incapacitated persons." The proposal would exempt from its provisions any hospital, nursing homes, maternity home, children's home or other home or institution which is already or

may hereafter be subject to regulation by the board. S. 149 passed the senate February 18. It proposes the creation of hospital authorities to engage in hospital construction, maintenance and operation. S. 166 passed the senate February 16 and the house February 22. To amend the law relating to hypnotic drugs, it proposes that the words "dangerous drugs" shall include, in addition to preparations already so included, "hormones, or hormone drug preparations, whether of natural origin, prepared from the so-called glands of internal secretion or endocrine glands, or whether synthetically produced, by whatsoever trade name or designation, or any compound or mixture thereof; except preparations intended for external use containing hormones in combination with other ingredients unfit for internal administration." No person would be able to sell or give away any such drug except on the prescription of a doctor of medicine, doctor of osteopathy, doctor of dental surgery or doctor of veterinary surgery, lawfully practicing his profession, and prescriptions for hormones could, on written authorizations on the face of the prescription by the prescriber, be refilled a definite number of times as indicated.

## RESOLUTIONS AGAINST PEPPER E. M. I. C. PLAN

The Commission on Maternal Welfare of the Medical Society of the State of Pennsylvania, the Philadelphia Obstetrical Society and the Pittsburgh Obstetrical and Gynecological Society have unanimously adopted the following resolution relative to the proposed Pepper plan for maternal and child welfare:

That the Commission on Maternal Welfare of the Pennsylvania State Medical Society is unanimously opposed to any legislation which will perpetuate the present E. M. I. C. plan or any legislation which shall set up any similar plan for maternal and child welfare.

This objection is based on the following facts:

1. There exists no emergency now and there is no public need for any such legislation.

2. Any such program will continue to be solely under the control of the Children's Bureau (or similar bureau) of the Department of Labor and will be centralized in Washington, D. C., and not under the direct control of competently trained physicians.

3. The standards of obstetric care have not improved under the E. M. I. C. plan and cannot be improved by such centralization.

4. The E. M. I. C. plan or any similar plan now under consideration (as in the Pepper bill or the Wagner-Murray-Dingell bill) sets up only a minimum standard of maternal care and at the level of the general practitioner.

5. Adequate maternal care requires a maximum standard of care, and this is not obtained or even approached in the requirements of the present E. M. I. C. plan or the proposed legislation of maternal care as embodied in the Wagner-Murray-Dingell bill.

6. The full and thorough training of future obstetricians has been and will continue to be hampered and interfered with by such legislation. This restriction is felt not only in our medical schools but also in our recognized, accepted or approved hospitals.

7. The medical profession has insisted on adequate maternal care for all expectant mothers. Adequate care denotes maximum care during pregnancy, at delivery and for a definite period after delivery. The present E. M. I. C. plan or the proposed legislation has concentrated on a minimum of care for before delivery only, disregarding entirely the very important phases of the problem, viz., during delivery and through the period directly and for six to eight weeks after delivery (other than a six weeks examination). These are phases in which the accidents and mismanagements make their appearance. No present (E. M. I. C.) or proposed legislation recognizes these two important phases of maternal care; hence the whole plan is full of danger. Maternal and child health depends on all these phases, not on one phase alone with total disregard of one or both of the other two.

All the foregoing factors lead definitely to a lowering of adequate or maximum maternal care standards, which the medical profession for the past twenty years has been teaching and practicing in an effort at reducing maternal mortality, which has been accomplished by the profession's efforts. The medical profession through its own organizations has striven to give adequate maternal care to all expectant mothers, and the present E. M. I. C. plan or the proposed legislation sets up only a minimum standard of maternal care. All such legislation, in our professional opinion, eventually will lead to an increase rather than a decrease in maternal mortality, principally because the safeguards are removed and the standards of obstetric care are lowered to a degree below that which we definitely know to be maximum and recognize as adequate.

The Commission on Maternal Welfare is headed by the chairman, Dr. James S. Taylor, Altoona, Pa.

# Official Notes

## CHANGES IN HEADQUARTERS STAFF

Dr. James R. Wilson, associate professor of pediatrics, Syracuse University School of Medicine, Syracuse, N. Y., has been appointed Secretary of the Council on Foods and Nutrition of the American Medical Association. He succeeds Dr. George Anderson, who resigned to specialize in pediatrics in Rochester, N. Y. Dr. Wilson graduated at Syracuse in 1921.

Mr. Ralph P. Creer, on terminal leave in the Army of the United States, in which he has been director of the medical illustration service, Office of the Surgeon General, has been named assistant in charge of motion pictures of the Bureau of Exhibits, a newly created position. Prior to his entry in service Mr. Creer organized the medical illustration service in the cancer research unit of the Veterans Administration, where he is now a consultant in medical illustration and visual aides. Before his work with the Veterans Administration Mr. Creer was director of the photographic department at the Yale University School of Medicine, New Haven. He organized and was first president of the Biological Photographic Association.

Dr. Frode Jensen, who recently completed three years in the Army of the United States, serving mainly in hospitals on the continent and in Engand, has joined the Council on Medical Education and Hospitals as a hospital inspector. Dr. Jensen, who was released from service with the rank of major, was born in Denmark and graduated at Columbia University College of Physicians and Surgeons in 1933.

Dr. Walton Van Winkle Jr., assistant medical director, U. S. Food and Drug Administration, Washington, in charge of new drugs, has been appointed assistant to Dr. Austin E. Smith to serve as secretary to the new Therapeutic Trials Committee, a standing committee of the Council on Pharmacy and Chemistry, effective April 1. Dr. Van Winkle graduated at Stanford University School of Medicine, San Francisco, in 1938. He concluded three years' service as instructor in the department of pharmacology at Stanford when he first joined the Food and Drug Administration as assistant chief of the division of pharmacology in 1942.

Dr. Harold D. Kautz is returning to the staff of the Council on Pharmacy and Chemistry as assistant to the Secretary. Dr. Kautz was a member of the staff prior to his entry in the Army of the United States some four years ago.

Mr. John A. Kovacs has been made an assistant in the office of the Secretary of the Council. Master Sergt. Kovacs received the Legion of Merit "for exceptionally meritorious conduct in the performance of outstanding services" in an administrative capacity in the North African Theater of Operations (THE JOURNAL, Dec. 18, 1943, p. 1054). Mr. Kovacs had been a member of the Council staff before he entered the army.

Dr. Harold R. Hennessy, Los Angeles, recently released from service in the medical corps of the army, has joined the staff of the Council on Industrial Health as Assistant Secretary. While in service Dr. Hennessy received the Bronze Star through the Fifteenth U. S. Army for his work with the military government public health program. Prior to his entry into the army he was medical officer with the California State Department of Public Health. Dr. Hennessy graduated at the University of Minnesota School of Medicine, Minneapolis, in 1930.

## Washington Letter

*(From a Special Correspondent)*

March 4, 1946.

### Hawley Takes Over as Veterans Medical Chief

Serious hospitalization problems faced Major Gen. Paul R. Hawley, who has been acting as medical chief of the Veterans Administration, as he took over today as permanent chief of the agency's Department of Medicine and Surgery. On loan from the Army up to now, he has retired from the Army to become No. 2 man in the Veterans Administration under Gen. Omar N. Bradley. The Hawley-Bradley hospital program calls for construction of hospitals near medical schools where the best doctors and surgeons will be available. Now it is feared that Congress will insist that the agency take over army and navy surplus hospitals instead of building some eighty new ones. Provision for putting up thirty of this total is now at stake in the 1947 independent office appropriation bill, which is awaiting conference. General Hawley estimates that two thirds of his time has been spent listening to pressure groups on and off Capital Hill.

### White House Conference on Saving Food

At the request of President Truman, former President Herbert Hoover and twelve other prominent Americans met in Washington last week for a White House conference on how to save food in this country to ease hunger abroad. The President has asked for an "aggressive voluntary program" to prevent waste of food in the United States so that more can be shipped to war torn sections of Europe and Asia. Mr. Hoover expects the European situation to be alleviated when the first harvest is reaped in June. The Secretary of Agriculture is less optimistic, believing that the chief problem is transportation, not supply. Meanwhile millers have launched the flour conservation program.

### Utilization of Military Medical Veterans

Brig. Gen. R. W. Bliss, Deputy Surgeon General of the Army, has written to the National Association of Veterans of the Hospital Corps, with headquarters in Washington at 1705 M Street N.W., urging that hospitals and allied veteran agencies wherever possible use the services of former medical department personnel. The association has appealed for ex-navy and coast guard and army medical veterans to register for cost free service in finding jobs in laboratories, hospitals or institutions as aides, technicians, nurses, doctors, dietitians and orderlies. Miss Ruth Kirkland, ex-pharmacist's mate, now chief clerk of the group, says that "utilizing military medical veterans, as suggested by General Bliss, will help in putting the nation on a higher health standard."

### Hospital Center Bill Under Consideration

Representative McMillan, chairman of the House District Committee, reports that a new plan is being studied to finance the 1,500 bed modern hospital center proposed for the nation's capital. It would involve deeding Emergency, Garfield and Episcopal hospitals to the government in return for full federal financing. Garfield Hospital would be razed and its 10 acre site used for the new center. The sum of $5,000,000 would be granted for improvements in Providence, Columbia, Children's and Sibley hospitals. The current market value of the land on which the three hospitals to go to the government are located is about $3,000,000, or one fifth of the cost of the proposed $15,000,000 center.

### Opposition to Antivivisection Bill

Dr. Alfred Blalock of Johns Hopkins testified against the Lemke antivivisection bill, joining army, navy and private physicians who are fighting the measure, which would prohibit medical experimentation on dogs in Washington. Said Dr. Blalock to the House District Judiciary Subcommittee "I defy any surgeon in this country to attempt this operation until he has performed it on one or two animals. I don't think he would have the temerity to try it on any one's child without that." Dr. Blalock said "this work would not have been done" without the dogs, because their blood vessels are large enough to work with and observe. It was pointed out that treatment of water on the brain, lung removal, the use of blood plasma for shock and other life saving operative procedures would never have come about without research on dogs. Brig. Gen. Stanhope Bayne-Jones of the Army, Capt. E. J. Hackenson, director of research at the Bethesda Medical Center, and Dr. Frederick Brady of the U. S. Public Health Service testified how research on dogs had contributed to treatment of such tropical diseases as malaria and filariasis.

### Hearings on Mental Health Institute

Public hearings will start March 6 before the Senate subcommittee on health and education on the bill to set up a mental health research institute in the U. S. Public Health Service. The bill would authorize grants for training mental health experts and demonstrations of mental care programs. The bill was introduced in the Senate last June by Senator Pepper, Democrat of Florida. Co-sponsors are Senators Thomas, Democrat of Utah, Tunnell, Democrat of Delaware, Hill, Democrat of Alabama, Murray, Democrat of Montana, La Follette, Progressive of Wisconsin, and Aiken, Republican of Vermont.

### Explosion in Operating Room

When a tank of nitrous oxide exploded in an operating room at Providence Hospital because of a faulty valve, it shattered the skylight and showered 8 persons, including an anesthetized patient, with heavy plate glass. Dr. Robert Coffey had just completed an appendectomy on the woman patient.

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## Coming Medical Meetings

Aero Medical Association, Chicago, April 7-9. Dr. David S. Brachman, 1016 Dime Building, Detroit 26, Secretary.

Alabama, Medical Association of the State of, Birmingham, April 16-18. Dr. Douglas L. Cannon, 519 Dexter Ave., Montgomery 4, Secretary.

Alaska Territorial Medical Association, Juneau, March 11-13. Dr. William P. Blanton, Juneau, Secretary.

American Association of Anatomists, Cleveland, April 4-6. Dr. Eliot R. Clark, University of Pennsylvania School of Medicine, Philadelphia 4, Secretary.

American Pediatric Society, Skytop, Pa., May 1-3. Dr. Hugh McCulloch, 325 N. Euclid Ave., St. Louis 8, Secretary.

American Physiological Society, Atlantic City, March 11-15. Dr. Wallace O. Fenn, 260 Crittenden Blvd., Rochester 7, New York, Secretary.

American Society for Experimental Pathology, Atlantic City, March 11-15. Dr. Harry P. Smith, 630 W. 168th St., New York 32, Secretary.

American Society for Pharmacology and Experimental Therapeutics, Atlantic City, March 11-15. Dr. Raymond N. Bieter, University of Minnesota Medical School, Minneapolis, Secretary.

American Surgical Association, Hot Springs, Va., April 2-4. Dr. Warfield M. Firor, Johns Hopkins Hospital, Baltimore 5, Secretary.

Arizona State Medical Association, Phoenix, May 2-3. Dr. Frank J. Milloy, 112 N. Central Ave., Phoenix, Secretary.

Arkansas Medical Society, Little Rock, April 14-15. Dr. W. R. Brooksher, 602 Garrison Ave., Fort Smith, Secretary.

Central States Dermatological Society, Detroit, April 27. Dr. Clarence E. Reyner, Henry Ford Hospital, Detroit, Secretary.

Connecticut State Medical Society, Hartford, May 1-3. Dr. Creighton Barker, 258 Church St., New Haven 10, Secretary.

Dallas Southern Clinical Society, Dallas, Texas, March 18-21. Dr. John G. Young, 1719 Pacific Avenue, Dallas 1, Director of Clinics.

Federation of American Societies for Experimental Biology, Atlantic City, March 11-15. Dr. D. R. Hooker, 19 West Chase Street, Baltimore 1, Secretary.

Florida Medical Association, Jacksonville, April 22-24. Dr. Robert B. McIver, P. O. Box 1018, Jacksonville, Secretary.

Iowa State Medical Society, Des Moines, April 17-19. Dr. John C. Parsons, 406 Sixth Ave., Des Moines 9, Secretary.

Kansas Medical Society, Wichita, April 22-25. Dr. F. R. Croson, 112 W. Sixth St., Topeka, Secretary.

Maryland, Medical and Chirurgical Faculty of, Baltimore, April 23-24. Dr. W. Houston Toulson, 1211 Cathedral St., Baltimore 29, Secretary.

Medical Library Association, New Haven, Conn., March 25-27. Miss Frida Pliefke, 2000 Medical Arts Bldg., Minneapolis 2, Secretary.

Missouri State Medical Association, St. Louis, March 24-26. Dr. Ralph L. Thompson, 634 N. Grand Blvd., St. Louis 3, Secretary.

New Orleans Graduate Medical Assembly, New Orleans, April 1-4. Dr. Joseph S. D'Antoni, 1430 Tulane Ave., New Orleans 13, Secretary.

New York, Medical Society of the State of, New York, April 29-May 3. Dr. Walter P. Anderton, 292 Madison Ave., New York 17, Secretary.

North Carolina, Medical Society of the State of, Pinehurst, May 1-3. Dr. Roscoe D. McMillan, P. O. Box 232, Red Springs, Secretary.

Postgraduate Institute of the Philadelphia County Medical Society, Philadelphia, April 9-12. Dr. George P. Muller, 301 S. 21st St., Philadelphia, Director.

South Carolina Medical Association, Greenville, April 30-May 2. Dr. Julian P. Price, 105 W. Cheves St., Florence, Secretary.

Southeastern Surgical Congress, Memphis, Tenn., March 11-13. Dr. Benjamin T. Beasley, 45 Edgewood Ave. S.E., Atlanta 3, Georgia, Secretary.

Tennessee State Medical Association, Knoxville, April 9-11. Dr. W. M. Hardy, 706 Church Street, Nashville, Secretary.

# Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION AND PUBLIC HEALTH.)

## DISTRICT OF COLUMBIA

**New Director of Venereal Disease.**—Lieut. Col. Samuel R. Taggart was recently appointed director of the venereal disease bureau of the District Health Department, filling the vacancy that occurred when Dr. Frederick G. Gillick resigned last August to accept a position with the U. S. Public Health Service in Philadelphia (THE JOURNAL, Sept. 1, 1945, p. 81). During the interim Dr. Benjamin D. Chinn, director of clinical work for the bureau, has been acting chief.

## FLORIDA

**Physician Honored.**—Dr. Benjamin H. Minchew, Waycross, Ga., past president of the Georgia Medical Association, has been awarded the Baynard Knight cup by the Waycross Kiwanis Club, the award being made annually to the Kiwanian contributing the most distinguished service to the community, it was reported January 6.

## IDAHO

**Licensure Applicants Must be Graduates of Approved Schools.**—The Idaho State Board of Medical Examiners at a meeting January 15 amended its regulations to provide that after February 15 all applicants must be graduates of an approved medical school of the United States or Canada, as designated in the latest revision by the Council on Medical Education and Hospitals of the American Medical Association. A new regulation was adopted stipulating that hereafter no applicant will be allowed to write the examination unless his credentials are in due form to be examined by the board one day before the beginning of the examination and, further, that all applicants must be present on the appointed date of the examination of their credentials for a personal interview. Applicants appearing late for the interview will not be permitted to write the examination.

## ILLINOIS

**New Executive Director for Handicapped Children.**—Howard E. M. Miller, M.A., Bloomington, has been appointed executive director of the Illinois Commission for Handicapped Children, effective March 1. The commission, with offices at 211 West Wacker Drive, Chicago, is the official state agency responsible for promoting and coordinating both public and private health, welfare, education and vocational services for children who are physically or mentally handicapped.

### Chicago

**The Jaffé Lecture.**—The second Richard H. Jaffé Lecture will be delivered April 9 at the Palmer House by Dr. Wilton M. Krogman, associate professor of anatomy and physical anthropology, Universty of Chicago School of Medicine, on "The Skeleton in Forensic Medicine."

**Raymond Allen Goes to Washington.**—Dr. Raymond B. Allen, executive dean of the Chicago colleges of the University of Illinois and dean of the medical school, has resigned to become president of the University of Washington, Seattle, effective September 1. Dr. Allen graduated at the University of Minnesota Medical School, Minneapolis, in 1928. Before joining Illinois he was dean of the Wayne University College of Medicine, Detroit. He became executive dean of the Chicago colleges of the university in 1939 and dean of the medical school in 1943.

## INDIANA

**Changes in Health Personnel.**—Dr. Thomas E. Conner, Freetown, has been appointed health officer of Jackson county, also jail and county farm physician, succeeding Dr. Daniel J. Cummings, Brownstown, whose term expired. Dr. James M. Burk, Decatur, resigned recently as secretary of the Decatur board of health, in which capacity he had served since 1943.

**Charles Myers Acting City Health Commissioner.**—Dr. Charles W. Myers, superintendent of the Indianapolis City Hospital, has been appointed acting city health commissioner pending the appointment of a permanent successor to the late Dr. Herman G. Morgan. He will continue at the hospital and be assisted in the health administration by Dr. Gerald F. Kempf, director of the bureau of preventive medicine.

**University News.**—Dr. John L. Arbogast, LaFayette, recently released from service in the army, has been named director of the clinical laboratory of the Indiana University Medical Center to succeed Dr. Clyde G. Culbertson, Indianapolis, who resigned to become a member of the research staff of Eli Lilly and Company. Mr. Edmund J. Shea, recently released from the army, has returned to the center as assistant administrator.

**Branch Offices Set Up for State Health Department.**—Under a decentralization program, five branch offices of the Indiana State Board of Health have been designated under a new zone setup. Each branch office will serve approximately eighteen counties, thereby giving coverage to all ninety-two counties of the state. Units have been created in Columbus, Valparaiso, Fort Wayne, Washington and Terre Haute. The six state board of health district health departments which previously served thirty-three counties in southern Indiana will be discontinued, as these areas will now be served by branch offices.

**Requirements for Osteopathic Physicians.**—The council of the Indiana State Medical Association has requested the state board of medical registration to adopt a resolution concerning the granting of licenses to all osteopathic physicians. The legislature in its 1945 session passed a law providing for the practice of medicine by osteopathic physicians under the same terms and conditions as apply to graduates of approved medical colleges. In its requests, the council urges:

> that each and every applicant for a certificate to practice osteopathy, medicine, surgery and obstetrics be required to have successfully passed an examination in materia medica in a medical school approved by the Indiana State Board of Medical Registration and Examination, said examination having been successfully passed as a prerequisite to graduation from said approved medical school, before the applicant is admitted to examination before the Indiana State Board of Medical Registration and Examination.

## LOUISIANA

**New Professor of Ophthalmology.**—Dr. George M. Haik, New Orleans, has been made professor of ophthalmology at the Louisiana State University Medical School, New Orleans, succeeding the late Dr. Theodore J. Dimitry.

**Dr. Kandle Joins Public Health Association.**—Dr. Roscoe P. Kandle, Monroe, has resigned as director of the division of local health services of the Louisiana State Board of Health to become field director of the American Public Health Association, with headquarters in New York.

**University News.**—The medical research division of Sharp and Dohme, Inc., Glenolden, Pa., has given $5,000 to the Tulane University of Louisiana School of Medicine, New Orleans, to be used in the continuation of research on sulfathalidine and tyrothricin, under the direction of Dr. Chapman G. Johnson, assistant professor of gynecology and obstetrics.

**Graduate Medical Assembly.**—The ninth annual meeting of the New Orleans Graduate Medical Assembly will be held at the Municipal Auditorium April 1-4 with the following guest speakers among others:

Dr. William D. Stroud, Philadelphia, Cardiology.
Dr. Frederick D. Weidman, Philadelphia, Dermatology.
Dr. Clifford J. Barborka, Chicago, Gastroenterology.
Dr. Goodrich C. Schauffler, Portland, Ore., Gynecology.
Dr. Russell L. Haden, Cleveland, Medicine.
Dr. George T. Harrell Jr., Winston-Salem, N. C., Medicine.
Dr. Edgar F. Fincher, Atlanta, Ga., Neuropsychiatry.
To be announced, Obstetrics.
Dr. James W. White, New York, Ophthalmology.
Dr. Earl D. McBride, Oklahoma City, Orthopedic Surgery.
Dr. Oliver E. Van Alyea, Chicago, Otolaryngology.
Dr. Robert A. Moore, St. Louis, Pathology.
Dr. Arild E. Hansen, Galveston, Pediatrics.
Col. James B. Brown, Valley Forge General Hospital, Phoenixville, Pa., Surgery.
Dr. Oscar T. Clagett, Rochester, Surgery.
Dr. Elmer Belt, Los Angeles, Urology.

Additional information may be obtained from Dr. Joseph S. D'Antoni, secretary, Room 105, 1430 Tulane Avenue, New Orleans 13.

## MARYLAND

**The Hideyo Noguchi Lectureship.**—"Charles Edouard Brown-Séquard, a Nineteenth Century Neurologist and Endocrinologist," was the general subject of the eighth Hideyo Noguchi Lectureship, sponsored by the Johns Hopkins University School of Medicine, Baltimore, and the Institute of the History of Medicine, Baltimore. James M. D. Olmsted, Ph.D., professor of physiology, University of California Medical School, Berkeley, gave the series. The first lecture was presented on February 19 on "Mauritian Student and Free Lance Investigator in Paris," the second February 20 on "His Neurological Practice and American Professorships," and the third February 21 on "In the Chair of Medicine at the Collège de France." The Noguchi Lectureship was established through a gift of $10,000 given in 1929 by Dr. Emanuel Libman, New York.

**Laboratory for Neuropsychiatric Research.**—The Alfred Ullman Laboratory for Neuro-Psychiatric Research is announced for the new name of the laboratory for neuroendocrine research of the surgical division of Sinai Hospital, established in 1935. The new laboratory is the result of the extension and the rebuilding of the old laboratory. The old unit was created through the sponsorship of Dr. Alfred Ullman, Baltimore, and was assigned to Dr. Hyman S. Rubenstein, Baltimore, for research, instruments and supplies being acquired by funds personally supplied by Drs. Ullman and Rubenstein. The newly extended laboratory was made possible through gifts from friends and patients of both physicians and it was decided to name the laboratory in honor of Dr. Ullman, recently retired chief of surgery at the Sinai Hospital, and at the same time to identify it with the principal interest of Dr. Rubenstein, director of neuropsychiatric research. Among other equipment, the laboratory has been furnished with facilities for neuropathologic investigation, a psychogalvanometer, electrical apparatus for peripheral nerve testing and the electroencephalograph. Arrangements have been made to include secretarial and technical assistance. In addition, a research fellowship has also been established.

## MICHIGAN

**The Beaumont Lecture.**—Dr. Robert E. Gross, Boston, will deliver the Beaumont Lecture in the Wayne County Medical Society April 8 on "Surgical Treatment for Abnormalities of the Heart and Great Vessels."

**People's Community Hospital Authority Formed.**—At a recent meeting of the board of directors of the People's Community Hospital, Inc., it was decided to transfer the assets of the group to the newly created People's Community Hospital Authority, now a municipal corporation. The new group will devote its entire time toward furthering permanent hospital facilities for western Wayne County. The People's Community Hospital in western Wayne County was opened in December 1944, the realization of a plan to make available beds at the Eloise Hospital and Infirmary, Eloise, for patients of private physicians (THE JOURNAL, Dec. 30, 1944, p. 1159).

**Course in Medical Economics.**—The Michigan State Medical Society and the medical schools of the University of Michigan, Ann Arbor, and Wayne University, Detroit, are cooperating in a course on medical economics. The first was opened at Wayne University College of Medicine, March 7, by Dr. Ray S. Morrish, Flint, president of the Michigan State Medical Society. Among his topics were medical societies and what they represent, covering organization, reasons and advantages of joining, how to join, importance of medical meetings and of young men taking part, medical economics and compliance with registration laws. Dr. L. Fernald Foster, Bay City, secretary of the state society, will discuss, March 14, medical public relations, medical legislation and accomplishments. Dr. Wilfrid Haughey, Battle Creek, editor of the *Journal of the Michigan State Medical Society*, will speak, March 21, on Michigan plan for medical service, service to veterans, rural and urban medicine, and voluntary vs. compulsory plans. A similar course will open at the University of Michigan some time in April.

## MINNESOTA

**Personal.**—Dr. Alloys F. Branton, director of the Willmar Clinic, Willmar, and executive secretary of the Minnesota Hospital Association, recently resigned both these positions to become administrator of the Baroness Erlanger Hospital, Chattanooga.

**New Industrial Hygiene Head.**—George S. Michaelson, chief engineer of the division of industrial health, Minnesota Department of Health, has been named acting director of the division. Dr. Leslie W. Foker, Minneapolis, resigned December 1 as director of the division to enter private practice in the industrial field, according to the *Industrial Hygiene Newsletter*.

**Tuberculosis Control Certificate Awarded.**—On Dec. 11, 1945 Northfield, the first school system in the United States to qualify, was awarded a tuberculosis control certificate by the American School Health Association. One certificate was given to the Northfield School System, and individual certificates went to Northfield Junior and Senior High School, Longfellow Grade School, Washington Grade School and Rosary Catholic School. Since the first award, announcement has been made of similar awards in other countries.

**Special Teaching Assistantships.**—Drs. Robert A. Aldrich, Rochester, and Clifford G. Grulee Jr., Evanston, Ill., have been appointed to special teaching assistantships in pediatrics and Dr. Charles U. Culmer, Duluth, to a similar post in surgery, it was announced by Dr. Harold S. Diehl, dean, University of Minnesota Medical School, Minneapolis. Dr. Aldrich graduated at the Northwestern University Medical School, Chicago, in 1944, Dr. Grulee at Northwestern in 1938 and Dr. Culmer at Northwestern in 1940. The funds to support these special assistantships have been provided by the Rockefeller Foundation as part of its program to aid in the development of selected young men whose preparation for teaching and research posts was interrupted by military service. Additional appointments are under consideration in surgery, in neuropsychiatry and in preventive medicine and public health.

## NEW HAMPSHIRE

**Changes in Health Personnel.**—Dr. Mildred I. A. Chamberlin, acting director of the division of maternal and child health and of the division of crippled children's services, state department of health, has resigned to return to private practice in Hillsboro. Capt. Frederick J. Vintinner has returned to his position with the department as director of the division of industrial hygiene. Mr. Vintinner has been serving with the sanitary corps of the Eighth Service Command.

## NEW YORK

**Director of Mental Hygiene Named.**—Dr. Robert P. Kamble, Mount Carmel, Pa., has been appointed director of the division of mental hygiene in the Westchester County Department of Health. He will organize and direct new mental hygiene clinics of the health department.

**Emery Dennis Joins Winthrop Company.**—Emery W. Dennis, Ph.D., chairman of the departments of bacteriology since 1931 and parasitology since 1935, School of Medicine, American University of Beirut, Lebanon, has been appointed associate director of the biologic division and head of the chemotherapy laboratory of the research laboratories of Winthrop Chemical Company, with offices in Rensselaer. Dr. Dennis received his Ph.D. at the University of California in 1931. From 1935 to 1943 he was associate professor of bacteriology and became professor of bacteriology and parasitology in 1943. During 1934 and 1935 he was in the United States as Rockefeller research fellow in bacteriology at Harvard Medical School.

**Compulsory Reporting of Legal Blindness.**—All cases of legal blindness in New York must be reported to the commission for the blind of the State Department of Social Welfare in accordance with a recent amendment to the act creating the New York State Commission for the Blind. It is now the duty of every health and social agency, attending or consulting physician or nurse to report to the state commission for the blind, in writing, the name, age and residence of persons who are blind within the definition of blindness and to furnish such additional information as the commission shall request for registration or prevention of blindness. The law supplements the mandated responsibility of the commission for the blind, section 8774, title 24, chapter 3 of the unconsolidated laws to maintain a complete register of the blind in the state of New York which shall describe the condition, cause of blindness, capacity for education and industrial training of each, with such other facts as may seem to the commission to be of value. Data as required by the commission for the blind will further the state's effort to prevent blindness through a comprehensive knowledge of the facts relative to the causes of blindness. This information will also aid in the earlier recognition and detection of cases for which remedial measures for restoration of vision are still possible. Likewise those who may desire the services of the commission for the blind will be benefited through acquaintance with the opportunities available to which they are entitled. Legal blindness is defined as total blindness or impaired vision of not more than 20/200 visual acuity in the better eye and for whom a diagnosis and medical findings show that vision cannot be improved to better than 20/200 or who has loss of vision due wholly or in part to impairment of field vision or to other factors which affect the usefulness of vision to a like degree. Apparent blindness should also be reported even though not based on an eye examination.

### New York City

**Sam Parker Named Director of Psychiatry.**—Dr. Sam Parker, Brooklyn, who has been an alienist in the department of hospitals since 1929, has been appointed director of psychiatry in charge of all psychiatric services in the department. The position has been vacant since the resignation of Dr. Karl N. Bowman (THE JOURNAL, Sept. 27, 1941). Dr. Parker graduated at University of California Medical School, Berkeley, in 1913. He will continue as director of the psychiatric service at Kings County Hospital.

**Associate Director Named for Speech Hospital.**—Dr. Lyman G. Richards, Boston, recently released from service in the navy with the rank of commander, has been appointed associate medical director of the National Hospital for Speech,

Disorders, 61 Irving Place. In announcing the appointment, Dr. James S. Greene, medical director of the institution, reported that in 1945, its twenty-ninth year of operation, a total of 3,893 patients registered at the institution, coming from all sections of the United States and Canada and Central and South America.

**Committee Named to Choose New Health Commissioner.**—A special committee of medical authorities has been formed to recommend a new city health commissioner to succeed Dr. Ernest L. Stebbins, who has resigned to become dean of Johns Hopkins University School of Hygiene and Public Health, Baltimore (THE JOURNAL, Oct. 10, 1945, p. 57). Members of the committee consist of Dr. Thomas Parran, Washington, D. C., surgeon general of the U. S. Public Health Service; Dr. Edward S. Godfrey Jr., Albany, New York State health commissioner; Dr. George Baehr, president of the New York Academy of Medicine; Dr. Wilson G. Smillie, chairman of the public health committee of the New York County Medical Society, and Homer Folks, philanthropist. The committee was formed at the suggestion of Dr. Stebbins, who recently received the thirteenth annual Lincoln Award, presented by the students of the Abraham Lincoln High School for distinguished service to the city. Dr. Stebbins accepted the award in the name of his staff and of every one else affiliated with the department of health. In his speech of acceptance he said that he was happy to see children express their interest in health, as evidenced by the award to him.

**Frederick Hoffman Dies.**—Frederick Ludwig Hoffman, LL.D., statistician, died in San Diego February 24, aged 80. Dr. Hoffman was born in Germany on May 2, 1865. He came to the United States when he was 19. He subsequently became associated with the Metropolitan Life Insurance Company and the Life Insurance Company of Virginia and served as consulting statistician of the Prudential Insurance Company of America from 1894 until 1935, when he retired at the age of 70. Dr. Hoffman wrote surveys of tuberculosis, cancer, public health, nutrition, malaria, suicide, homicide and various problems of longevity. He held memberships in many medical societies, including the German Cancer Research Society. He was a charter member of the National Tuberculosis Association, director of the American Public Health Association and the American Cancer Society and a member of the National Safety Council. He was a prolific contributor of articles, brochures and books covering a broad range of medical subjects dealing with his various evaluations. In 1911 Tulane University of Louisiana, New Orleans, bestowed on him the honorary degree of doctor of laws. In 1934, with the consent of the Prudential Insurance Company, he presented to the cancer research laboratories of the University of Pennsylvania Graduate School of Medicine, Philadelphia, his library on the subject. In 1943 he was presented in absentia the Clement Cleveland Award. Dr. Howard C. Taylor, in his acceptance address for Dr. Hoffman, credited him with the founding of the American Cancer Society.

## NORTH CAROLINA

**Changes in Health Personnel.**—Dr. Hector H. Henry has been named venereal disease control officer for the city of Charlotte.——Dr. William K. McDowell, Tarboro, has resigned as health officer of Halifax County.

**Dr. Morehead to Direct Cancer Program.**—Dr. Robert P. Morehead, associate professor of pathology and director of the department, Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, has been appointed educational director of the North Carolina division of the field army of the American Cancer Society.

**Dr. Davis Resigns From Industrial Hygiene Division.**—Dr. Charles B. Davis Jr., Wilmington, has resigned as director of the division of industrial hygiene of the North Carolina State Board of Health, effective February 1. Newspaper reports indicate that Dr. Davis would return to private practice in Wilmington.

## OHIO

**Tuberculosis Hospital Association Formed.**—The Ohio Tuberculosis Hospital Association was organized Dec. 15, 1945 to set up proposed standards for hospital care. Dr. Oren A. Beatty, Mansfield, superintendent of the Richland County Tuberculosis Sanatorium, is chairman and Dr. William L. Potts, Columbus, of the Franklin County Sanatorium is secretary.

**Personal.**—Dr. Roy H. Clunk, Massillon, was recently elected president of the Massillon school board.——Dr. Arthur M. Culler, Dayton, has been appointed associate professor of ophthalmology at the Ohio State University College of Medicine, Columbus.——Dr. Donald E. Hale, Butte, Mont., who for the past three years has been in charge of anesthesia at the U. S. Naval Hospital in Philadelphia, has been appointed anesthesiologist at the Cleveland Clinic.

**Appointments at Cincinnati.**—Dr. Burr N. Carter, recently assistant to the chief surgical consultant in the office of the Surgeon General, Washington, D. C., with the rank of colonel, was named professor of surgery at the University of Cincinnati College of Medicine, succeeding the late Dr. Mont R. Reid. Dr. Albert B. Sabin was promoted from associate professor to full professor of research pediatrics at the school. Joseph L. Schwind, Ph.D., associate professor of anatomy, Albany Medical College, has been named chairman of the department of anatomy, succeeding Dr. Edward F. Malone, resigned.

## PENNSYLVANIA

### Philadelphia

**Personal.**—Dr. John W. Crosson, associate medical director of the Medical Research Division of Sharp and Dohme, Inc., has been appointed medical director.

**Class of 1911 to Hold Reunion.**—The thirty-fifth reunion of the Medical Class of 1911, University of Pennsylvania School of Medicine, will be held May 14 at the Pine Valley Golf Club, Clementon, N. J. Dr. Wilbur H. Haines, 255 South Seventeenth Street, is secretary.

**Society News.**—Dr. Carlos Santos, Lisbon, Portugal, addressed a special meeting of the Philadelphia Roentgen Ray Society, January 17. *Philadelphia Medicine* reported that Dr. Santos presented a new type of stereoscopic fluoroscopy and a brief analysis of the fundamentals in stereoscopic vision.

**Alpha Omega Alpha Lecture.**—Dr Eugene M. Landis, George Higginson professor of physiology, Harvard Medical School, Boston, gave the annual Alpha Omega Alpha Lecture at Jefferson Medical College, January 16. His subject was "Venous Pressure and Cardiac Failure in the Laboratory and Clinic."

**Postgraduate Institute.**—The tenth annual Postgraduate Institute of the Philadelphia County Medical Society will be held at the Bellevue-Stratford Hotel, April 9-12, on the subject of "Progress in Medicine." There will be the usual technical and scientific exhibits. Registration fee for nonmembers of the society is $5. Medical officers are admitted free. The director is Dr. George P. Muller, 301 South 21st Street, Philadelphia 3.

**New Professor of Surgery.**—Dr. John H. Gibbon Jr., assistant professor of surgery, University of Pennsylvania School of Medicine, has been appointed professor of surgery and director of surgical research at the Jefferson Medical College. He will succeed Dr. George P. Muller, Grace Revere Osler professor of surgery, who will retire at the end of the current school term in March. Dr. Gibbon is the son of Dr. John H. Gibbon, emeritus professor of surgery at Jefferson.

**Jefferson Rearranges Obstetric Program.**—Dr. Thaddeus L. Montgomery, professor of obstetrics and gynecology and head of the department at Temple University School of Medicine and Hospital, has been appointed to a similar position at Jefferson Medical College. He will succeed Dr. Norris W. Vaux, whose retirement becomes effective at the end of the current school term in March. Dr. Montgomery will devote his major teaching to obstetrics but will continue his practice and participation in gynecology. Coincidental with the announcement of Dr. Montgomery's appointment was one stating that the department of gynecology and the department of obstetrics at the Jefferson Medical College and Hospital will be combined in one department with Dr. Lewis C. Scheffey, professor of gynecology since 1940, as head of the department, professor of obstetrics and gynecology, and director of the division of gynecology. The amalgamation will permit the most effective cooperation in the teaching and practice of obstetrics and gynecology.

## SOUTH CAROLINA

**Former State Health Officer Honored.**—The Columbia Medical Society at its January meeting presented Dr. James A. Hayne, Columbia, former state health officer, with a silver pitcher and tray for his nearly thirty-five years of service in public health work in the state. Dr. Hayne, who became state health officer of South Carolina in 1911, retired in 1944 to become public health education director for the department (THE JOURNAL, May 6, 1944, p. 73). Dr. Hayne is a former president of the Columbia Medical Society and also of the South Carolina Medical Association.

## TEXAS

**Dr. Cary Honored.**—Dr. Edward H. Cary, Dallas, on February 21 was presented with the Linz Award, given by Linz Brothers to the "outstanding citizen of Dallas." Dr. Cary was cited for his activities as a medical educator and principally for his work as founder and director of the Southwestern Medical Foundation. The *Times Herald* is sponsor of the award, which is donated annually by Linz Brothers. It is a silver shield on a mahogany base and carries the inscription "for the high ideals and noble aims, from which your splendid work has resulted in greatest benefit to the community of Dallas, this presentation is made by Linz Brothers." Dr. Cary, as president of the board of trustees of the Southwestern Medical Foundation, was responsible for the establishment of the Southwestern Medical College. He graduated at Bellevue Hospital Medical College, New York, in 1898. From 1902 until 1943, when it moved to Houston, he was professor of ophthalmology and otolaryngology and head of the department at Baylor University College of Medicine, serving as dean from 1903 to 1920. He served as member of the board of trustees of the American Medical Association from 1925 to 1929 and was president of the Association in 1932.

**Activities at Texas Medical Branch.**—Morris Pollard, D.V.M., formerly of Bellevue, Md., has been appointed assistant professor of preventive medicine and public health to take charge of teaching and research in virus disease at the University of Texas Medical Branch, Galveston. Dr. Pollard organized and directed the virus laboratory of the Eighth Service Command of the army. The National Foundation for Infantile Paralysis, Inc., has granted $3,500 for the support of the work of Ardzroony A. Packchanian, Ph.D., associate professor of bacteriology and director of the laboratory of microbiology at the university. The grant is made to assist in the development of an appropriate small animal host for poliomyelitis virus. The John and Mary R. Markle Foundation has made a grant of $4,000 to aid the studies on the chemotherapy of malaria under the direction of Dr. Wendell D. Gingrich of the laboratories of bacteriology and parasitology at the university. The John and Mary R. Markle Foundation of New York has given a grant of $6,750 to support the studies on rickettsial diseases under the direction of Dr. Ludwik Anigstein, associate professor of tropical medicine, and Russell W. Strandtmann, Ph.D., assistant professor of preventive medicine at the university. The Winthrop Chemical Company of New York has made a grant for the study of new anesthesia under the direction of George A. Emerson, Ph.D., professor of pharmacology at the university. Cancer research at the university under the direction of Wilbur A. Selle, Ph.D., professor of physiology, has received a grant from the International Cancer Research Foundation, Philadelphia.

## WEST VIRGINIA

**Quarantinable Diseases.**—Only five communicable diseases are quarantinable in West Virginia under revised regulations adopted by the Public Health Council at a meeting held at Charleston, January 7. Diphtheria, smallpox, epidemic typhus (louse borne), plague and cholera are still classed as quarantinable, but placarding is required only for smallpox, cholera and plague. Previously measles, meningococcic meningitis, poliomyelitis, scarlet fever and whooping cough have been quarantinable. For other communicable diseases only isolation of the patient is required, and child contacts are to be excluded from school as indicated on the chart of the "Common Communicable Diseases" recently prepared for distribution by the state health department. The new regulations were approved by the council of the West Virginia State Medical Association at a meeting held in October 1945, and the Public Health Council has fixed July 1, 1946 as the official effective date. The state health department has suggested that all local health departments adopt the new regulations immediately so that ground work may be laid before they actually become law. This is necessary because all regulations of the Public Health Council must be advertised locally before they can be officially put into effect. A new communicable disease code patterned closely after the American Public Health Association's manual on "The Control of Communicable Diseases" was also adopted by the Public Health Council. This action was also recommended by the council of the state medical association. While pellagra is no longer reportable, the following have been added to the list of reportable diseases.

- Epidemic diarrhea of the newborn
- Favus
- Food infections (salmonellosis)
- Food poisoning (staphylococcus and botulinus)
- Granuloma inguinale
- Infectious keratoconjunctivitis
- Lymphogranuloma venereum
- Rat bite fever
- Relapsing fever
- Rheumatic fever
- Puerperal infections
- Typhus
- Weil's disease
- Glanders
- Acute infectious hepatitis
- Pneumonia (all types)

## GENERAL

**Appointments to Rockefeller Institute.**—The board of scientific directors of the Rockefeller Institute for Medical Research announces the appointment of David P. C. Lloyd, Ph.D., New Haven, as associate member. Dr. Reginald M. Archibald has been appointed associate and James A. Baker, Ph.D., has been promoted from assistant to associate; Cynthia H. Pierce, Ph.D., and James R. Weisiger, Ph.D., have been appointed assistants, all of New York.

**New Administrative Officer for Hard of Hearing.**—Mr. Harry P. Wareham, Rochester, N. Y., for many years identified with campaigns for community chests, in various cities and formerly executive vice president of the National War Fund, has been named executive vice president of the American Society for the Hard of Hearing, effective March 1. In his new position Mr. Wareham will direct the expansion program planned by the society.

**Publication on Colloid Science.**—A new periodical known as the *Journal of Colloid Science* began publication with the January issue. Its editors are chosen from British, Canadian and American institutions with consulting editors from other countries as well. The periodical is published by the Academic Press, Inc., 125 East 23d Street, New York 10. It is published bimonthly at $10 per year. The chief editor is Dr. Victor K. LaMer, Columbia University, New York.

**Society News.**—The American Dietetic Association will hold its twenty-eighth annual meeting at the Netherland Plaza Hotel, Cincinnati, October 14-18.——The fifty-ninth meeting of the American Association of Anatomists will be held in Cleveland April 4-6. Demonstrations will be held at Western Reserve University School of Medicine, Cleveland, and all other sessions at the Hotel Statler.——The American Hospital Association will meet in Philadelphia the week beginning September 30.

**Dr. Collisi Medical Director of Planned Parenthood Group.**—Dr. Harrison S. Collisi, Grand Rapids, Mich., who retired from the Army of the United States with the rank of colonel in December 1945, has been named medical director of the Planned Parenthood Federation of America, New York, effective March 4. He succeeds the late Dr. Claude C. Pierce. In his new position, Dr. Collisi will cooperate with state public health services to make planned parenthood an integral part of their maternal health services and will work closely with medical schools and colleges providing instruction in the control of human fertility. Dr. Collisi graduated at the University of Michigan Medical School, Ann Arbor, in 1912. He entered the army in May 1942.

**Obstetricians Resume Midyear Clinics.**—The American Association of Obstetricians, Gynecologists and Abdominal Surgeons will resume its midyear clinics when it holds sessions in Chicago April 12-13. On the tentative program are Drs. Jacob P. Greenhill and associates, Cook County Hospital; Frederick H. Falls and associates, Research and Educational Hospitals; Herbert E. Schmitz and associates, Mercy Hospital-Loyola University Clinics, and Edward L. Cornell and associates, all of Chicago, Henrotin Hospital. The atomic bomb will be discussed at the dinner session. The association also announced that its annual prize contest will be conducted again this year. For information concerning either activity of the association address Dr. James R. Bloss, secretary, 418 Eleventh Street, Huntington 1, W. Va.

**Medical Library Meeting.**—The Medical Library Association will hold its forty-fifth meeting at the Yale Medical Library, New Haven, Conn., March 25-27; headquarters will be at the Hotel Taft. Miss Mary L. Marshall, New Orleans, will deliver the presidential address, on "Training for the Medical Librarianship." One session will be devoted to the History of Medicine in Connecticut, by Dr. Herbert Thoms, curator of the Yale Medical Memorabilia of the Yale University School of Medicine, New Haven, Conn., and by Harold S. Burr, Ph.D., and The Yale Medical Libraries, by Dr. John F. Fulton, New Haven. Another session will be devoted to a report on the Army Medical Library by the staff of the library. Other speakers will be:

- Dr. Sanford V. Larkey, Baltimore, Experiences as Medical Historian of the European Theater.
- Miss Mildred V. Nayor, The Exchange.
- Mr. Jurgen Raymond, New York Academy of Medicine, Interlibrary Lending Policies.
- Miss Ethel Wigmore, National Medical Research Institute, London, Medical Libraries in Britain and on the Continent.
- Dr. W. W. Francis, librarian, Osler Library, McGill University, Advertisements in Early Printed Books.

Members of the staff of the Stirling Memorial Library, Mr. James F. Babb, Miss Mary C. Withington and Mr. Donald G. Wing, will discuss respectively the university library, planning and erection of the library building and the short title catalogue of English books, 1641-1700.

# Deaths

**Harold Dean Palmer** ✦ Philadelphia; University of Minnesota Medical School, Minneapolis, 1928; born in Fairmont, Minn., in 1901; professor of psychiatry at the Woman's Medical College of Pennsylvania; associate in psychiatry at the University of Pennsylvania School of Medicine, where he was psychiatrist of the student health service; specialist certified by the American Board of Psychiatry and Neurology, Inc.; member of the American Association for the Advancement of Science, Association for Research in Mental and Nervous Diseases, Philadelphia Neurological Society and the American Neurological Society; president of the Philadelphia Psychiatric Society, 1943-1944; fellow of the College of Physicians of Philadelphia, American Psychiatric Association and the American College of Physicians; lieutenant commander, medical corps, U. S. Naval Reserve, retired; attending chief, psychopathic department, Philadelphia General Hospital; senior psychiatrist, Institute of the Pennsylvania Hospital; psychiatrist to the Pennsylvania Hospital; consultant, Department for Mental and Nervous Diseases, Pennsylvania Hospital; died November 20, aged 44, of coronary thrombosis.

**Paul Forrey Stookey** ✦ Kansas City, Mo.; Chicago College of Medicine and Surgery, 1913; born in Cedar Rapids, Iowa, in 1888; assistant professor of medicine at the University of Kansas School of Medicine, Kansas City, Kan.; specialist certified by the American Board of Internal Medicine; fellow of the American College of Physicians; in 1933 appointed epidemiologist of the city health department; professor of immunology and head of the department of experimental medicine, Kansas City Western Dental College; formerly associated with the U. S. Public Health Service Reserve; served during World War I; senior consulting physician and director of service, isolation department, Municipal Hospital; attending physician, Research Hospital and St. Joseph Hospital; chief of staff at St. Mary's Hospital, where he died November 25, aged 57, of carcinoma of the left lung.

**Herman Grover Morgan,** Indianapolis; Indiana University School of Medicine, Indianapolis, 1909; served as president of the Indianapolis Medical Society; secretary of the city board of health for thirty-three years and in 1945 appointed secretary of the newly created Indianapolis Board of Health and Hospitals and director of public health; the new health center of Flanner House, Negro welfare agency, was dedicated as the Herman G. Morgan Health Center in his honor; assisted in the organization of Lilly Base Hospital number 32 and was stationed at Fort Harrison as a member of the United States Public Health Service during World War I; superintendent of the Indianapolis City Hospital in 1918 and 1919; an instructor of public health and sanitation at the City Hospital School of Nursing, a position he filled until a short time before his death on January 8, aged 60, of carcinoma of the stomach.

**Darwin Clare Perkins,** Jamestown, N. Y.; New York Homeopathic Medical College and Hospital, New York, 1906; born July 28, 1879; member of the American Medical Association; fellow of the American College of Surgeons; specialist certified by the American Board of Obstetrics and Gynecology, Inc.; served as health officer of the town of Busti and the Village of Celeron; health officer of Lakewood, where he had been a member of the board of education since 1933 and president since 1937; recently resigned a position on the faculty of the Jamestown Business Institute; vice president of the board of visitors of the Gowanda State Homeopathic Hospital, Helmuth; on the staff of the Jamestown General Hospital and the Woman's Christian Association Hospital, where he died November 27, aged 66, of arteriosclerosis.

**Abraham Trasoff** ✦ Philadelphia; Medico-Chirurgical College of Philadelphia, 1915; specialist certified by the American Board of Internal Medicine; fellow of the American College of Physicians and the American Academy of Allergy; a captain in the medical corps of the U. S. Army during World War I; a consultant for the U. S. Veterans Bureau from 1919 to 1925; consultant for the Selective Service Board during World War II; adjunct visiting physician and head of the department of allergy at the Mount Sinai Hospital from 1927 to 1933, when he became chief of medicine; on the staffs of St. Luke's and Broad Street hospitals; died November 24, aged 56, of coronary thrombosis.

**Robert Claud Farrier** ✦ East St. Louis, Ill.; Memphis (Tenn.) Hospital Medical College, 1908; director of the East Side Health District and the St. Clair County Defense Zone Health Department; served as health officer of Delta County, Mich., with headquarters in Escanaba, and director of the Monongalia County (W. Va.) Health Department; at one time in charge of the health department in Homer, La.; member of the American Public Health Association and the American Society for Tropical Diseases; past president of the West Virginia Public Health Association; died in the Barnes Hospital, St. Louis, November 20, aged 58, of hypertensive cardiovascular disease.

**Dexter Hall Hardin** ✦ Dallas, Texas; Baylor University College of Medicine, Dallas, 1920; member of the American Medical Association; since 1943 associate professor of clinical gynecology at the Southwestern Medical Foundation School of Medicine; assistant in clinical gynecology at his alma mater from 1922 to 1926, where he was instructor from 1926 to 1938 and assistant professor from 1938 to 1943; served during World War I; dispensary gynecologist and associate gynecologist at the Parkland Hospital and the Baylor Hospital, where he died November 17, aged 51.

**Hamilton Goss Ansley** ✦ Decatur, Ga.; University of Georgia Medical Department, Augusta, 1928; past president of the DeKalb County Medical Society; on the staff of the Emory University (Ga.) Hospital; died December 16, aged 43, of cerebral hemorrhage.

**Melvin Leighton Battles,** Norwalk, Ohio; Cleveland Homeopathic Medical College, 1904; member of the American Medical Association; served during World War I; in 1938 retired from the National Guard with the rank of major; died November 27, aged 66.

**Louis Bernstein** ✦ Pittsburgh; University of Pittsburgh School of Medicine, 1923; formerly on the staff of the Veterans Administration Facility in Aspinwall; died in the Presbyterian Hospital November 24, aged 45, of coronary occlusion.

**Leslie Carr Bishop,** Wichita, Kan.; McGill University Faculty of Medicine, Montreal, Que., Canada, 1903; member of the American Medical Association; on the staffs of the Wichita and St. Joseph hospitals; consultant at the Veterans Administration Facility; died in Altadena, Calif., January 6, aged 63, of heart disease.

**William N. Boerstler,** Stow, Ohio; Western Reserve University Medical Department, Cleveland, 1883; died November 30, aged 89, of senility.

**Oliver Diehl** ✦ Medical Director, Captain, U. S. Navy, retired, Bethayres, Pa.; Jefferson Medical College of Philadelphia, 1879; entered the U. S. Navy in July 1882; served in the Spanish-American War, Boxer Rebellion and World War I; retired July 7, 1918 for incapacity resulting from an incident of service; died in Wyncote December 16, aged 89, of a fractured hip and uremia.

**Thomas Samuel Finney,** Wichita, Kan.; Johns Hopkins University School of Medicine, Baltimore, 1919; member of the American Medical Association; on the staffs of St. Joseph and Wichita hospitals; died January 29, aged 52, of cardiac decompensation and cerebral hemorrhage.

**James Siebert Gamble,** Lincolnton, N. C.; Medical College of Virginia, Richmond, 1943; superintendent of the Reeves Gamble Hospital and local surgeon for the Seaboard and Southern Railways; died near the Charlotte airport November 4, aged 27, when his private plane crashed.

**Thomas A. Guillory,** Groesbeck, Texas; Kentucky School of Medicine, Louisville, 1908; member of the American Medical Association; died in Oakdale, La., November 7, aged 63.

**Pugh Haynes,** Woodlawn, Tenn.; University of Louisville (Ky.) Medical Department, 1884; died November 20, aged 85.

**Emil Benjamin Isgreen,** Salt Lake City; Rush Medical College, Chicago, 1897; member of the American Medical Association; honorary member of the Utah State Medical Association; on the staff of the Dr. W. H. Groves Latter-Day Saints Hospital, where he died November 25, aged 79, of coronary and cerebral arteriosclerosis.

**John Dillard Jacobs,** Atlanta, Ga.; University of Nashville (Tenn.) Medical Department, 1898; formerly professor of hygiene and physiology at his alma mater, where he served as secretary and treasurer; died in the Halifax District Hospital, Daytona Beach, Fla., October 17, aged 71.

**Robert John James,** Los Angeles; Minneapolis College of Physicians and Surgeons, medical department of Hamline University, 1899; on the staffs of the Golden State and Methodist hospitals; died November 30, aged 73.

**Ray Walter Karras** ✦ Lake City, Fla.; Wisconsin College of Physicians and Surgeons, Milwaukee, 1912; member of the California Medical Association; served on the staffs of various

Veterans Administration facilities; major, medical corps, Army of the United States, not on active duty; died November 9, aged 57.

**Maurice I. Klein,** East Orange, N. J.; Baltimore University School of Medicine, 1902; formerly affiliated with the Beth Israel Hospital in Newark; died in the Memorial Hospital, New York, November 21, aged 63, of heart disease.

**Albert Knooihuizen,** Holland, Mich.; Detroit College of Medicine, 1895; died November 17, aged 81.

**Alonzo E. Mack** ✦ Glendale, Calif.; John A. Creighton Medical College, Omaha, 1896; formerly professor of obstetrics at his alma mater; died November 20, aged 75.

**Edward McCarthy** ✦ Richmond, Va.; Medical College of Virginia, Richmond, 1881; died November 28, aged 86, of a fractured hip and uremia.

**James Albert McComb** ✦ Lebanon, Mo.; Beaumont Hospital Medical College, St. Louis, 1887; on the staff of the Wallace Hospital; president of the public library board; for many years president of the State Bank of Lebanon and chairman of the board of directors at the time of his death on November 15, aged 82.

**Gilbert Copson McCormick** ✦ Kansas City, Mo.; Illinois Medical College, Chicago, 1909; served during World War I; major, medical reserve corps, U. S. Army, not on active duty; died in the Menorah Hospital November 21, aged 71, of cerebral hemorrhage.

**John Francis McDonald,** Hillsboro, Texas; University of Texas School of Medicine, Galveston, 1912; member of the American Medical Association; served during World War I; major in the medical corps of the National Guard not on active duty; died November 18, aged 64, of coronary occlusion.

**Walter McDowell** ✦ Evansville, Ind.; Indiana University School of Medicine, Indianapolis, 1929; interned at St. Luke's Hospital in Jacksonville, Fla.; on the staffs of the Welborn-Walker and Protestant Deaconess hospitals; began active duty as a first lieutenant in the medical corps, Army of the United States, in July 1942 and relieved from active duty in November 1942; died November 27, aged 40, of coronary thrombosis.

**John Joseph McKenna,** Philadelphia; Hahnemann Medical College and Hospital of Philadelphia, 1905; associate professor of roentgenology at his alma mater; served overseas as major in the medical corps of the U. S. Army during World War I; on the staff of the Hahnemann Hospital, where he died November 25, aged 72, of aleukemic leukemia.

**William E. Messenger,** Independence, Mo.; College of Physicians and Surgeons, Keokuk, Iowa, 1887; died November 17, aged 83.

**William Henry Morrison,** Springfield, Mass.; Baltimore Medical College, 1905; member of the American Medical Association; died November 22, aged 65, of coronary thrombosis and hypertensive heart disease.

**William Ralph Needelman** ✦ Portland, Maine; Yale University School of Medicine, New Haven, 1923; served during World War I; commissioned a first lieutenant in the 240th Coast Artillery, Maine National Guard, in 1937, being called to active duty in September 1940 with the rank of captain; discharged a year later because of ill health; member of the staff at the local induction station since its inception; formerly county medical examiner; on the staff of the Mercy Hospital, where he died November 22, aged 51, of heart disease.

**Samuel Arthur Nichols** ✦ Clarksville, Md.; Baltimore Medical College, 1897; past president of the Medical and Chirurgical Faculty of Maryland, Howard County Medical Society and the Maryland, Virginia and District of Columbia Medical Society; affiliated with the Montgomery County General Hospital, Olney, and the Maryland General Hospital in Baltimore; died November 2, aged 75, of coronary thrombosis.

**Alfred John Nixon,** Taunton, Mass.; Boston University School of Medicine, 1894; died recently aged 80, of arteriosclerosis.

**Arthur H. Northrup** ✦ Clearwater, Fla.; Medical College of Indiana, Indianapolis, 1904; member of the Indiana State Medical Association; died November 5, aged 70, of cerebral hemorrhage.

**Aage Emanuel Olsen,** Ann Arbor, Mich.; Detroit College of Medicine and Surgery, 1926; member of the American Medical Association and the New Mexico Medical Society; at one time Danish vice counsel for Michigan; died November 4, aged 46, of coronary thrombosis.

**Mercer Cranor Parrott** ✦ Kinston, N. C.; Tulane University of Louisiana School of Medicine, New Orleans, 1917; fellow of the American College of Surgeons; chief surgeon and medical director of the Parrott Memorial Hospital; director of the First Citizens Bank; died November 17, aged 51, of coronary occlusion.

**Irvin N. Paul,** Perry, Iowa; the Hahnemann Medical College and Hospital, Chicago, 1885; died November 30, aged 86, of hypostatic pneumonia.

**Robert Ernest Perdue,** Norwalk, Conn.; Starling Medical College, Columbus, 1895; member of the American Medical Association; for many years health officer of Norwalk; died in the Norwalk Hospital recently, aged 70.

**Victor Nathaniel Peterson** ✦ St. Paul; University of Minnesota College of Medicine and Surgery, Minneapolis, 1906; past president of St. Paul Surgical Society; died in the Bethesda Hospital November 28, aged 66, of carcinoma of the stomach.

**Rocco Joseph Petrucelli** ✦ Meriden, Conn.; Columbia University College of Physicians and Surgeons, New York, 1934; diplomate of the National Board of Medical Examiners; interned at the United Hospital in Port Chester, N. Y.; chairman of the board of health; physician in parochial schools; died in the Memorial Hospital, New York, November 27, aged 36.

**Daniel Ward Philo,** Fremont, Ohio; Physio-Medical College of Indiana, Indianapolis, 1901; Toledo Medical College, 1906; served during the Spanish-American War and World War I; died in a hospital at Miami, Fla., November 29, aged 72.

**William Joseph Pulley** ✦ New York; Bellevue Hospital Medical College, New York, 1891; formerly clinical professor of medicine at the University and Bellevue Hospital Medical College, where he served as medical superintendent of the college clinic; consulting physician at the Riverside Hospital; died November 16, aged 76, of coronary occlusion.

**Ernest Marion Ragsdale,** Columbia, Tenn.; Vanderbilt University School of Medicine, Nashville, 1901; member of the American Medical Association; past president of the Maury County Medical Society; for many years resident physician for the Columbia Military Academy; died November 9, aged 65, of cerebral hemorrhage.

**James Linton Rentfro** ✦ Brownsville, Texas; Louisville Medical College, 1907; in 1944 honored at a banquet given by the Matamoros Medical Association, Tamaulipas, Mexico, in recognition of his work among the Latin American people on both sides of the Rio Grande; on the staff of the Mercy Hospital; died November 11, aged 60, of coronary sclerosis.

**George G. Richardson,** Marion, Ind.; Medical College of Indiana, Indianapolis, 1905; member of the American Medical Association; served as county health officer; on the staff of the Marion General Hospital; died November 8, aged 64, of coronary thrombosis.

**Thomas Richmond** ✦ Kansas City, Kan.; University Medical College of Kansas City, Mo., 1897; past president of the Wyandotte County Medical Society, serving as its treasurer for many years; served overseas during World War I; on the staffs of the Bethany, Providence and St. Margaret's hospitals; died November 4, aged 73, of coronary thrombosis.

**Stonewall Jackson Rollow,** Clarksville, Tenn.; University of Nashville Medical Department and Vanderbilt University School of Medicine, Nashville, 1887; served during World War I; died in the Veterans Administration Facility, Marion, November 26, aged 80, of heart disease.

**J. H. Eugene Rosamond,** Memphis, Tenn.; Louisville Medical College, 1902; specialist certified by the American Board of Pediatrics; member of the American Pediatric Society; fellow of the American College of Physicians; past president of the Tennessee Pediatric Society; at one time member of the council for the Southern Medical Association; died December 12, aged 65.

**Douglas Rothschild,** Detroit; Detroit College of Medicine, 1907; died November 1, aged 60, of carcinoma of the throat.

**Maurice Shapiro** ✦ Bayonne, N. J.; University and Bellevue Hospital Medical College, New York, 1910; past president of the Hudson County Medical Society; formerly city physician and school physician; served as secretary of the board of directors and chief of clinics at Bayonne Hospital; formerly assistant attending dermatologist at the Bellevue Hospital in New York; consulting dermatologist at the Margaret Hague Maternity Hospital in Jersey City; died November 30, aged 57, of coronary occlusion and diabetes mellitus.

**George Shorkley** ✦ Mount Vernon, Wash.; Hahnemann Medical College and Hospital of Philadelphia, 1899; served in the Spanish-American War, on the Mexican border and during World War I; on the staff of the Mount Vernon General Hospital; died November 30, aged 74, of coronary thrombosis.

**Edwin F. Smith,** Lodi, Calif.; Ohio Medical University, Columbus, 1896; died November 27, aged 75.

**David Henderson Sprague,** Central Valley, N. Y.; University of the City of New York Medical Department, New York, 1886; died November 25 of chronic bronchitis.

**Charles William Stratton,** Lee, Mass.; Albany (N. Y.) Medical College, 1905; member of the American Medical Association; died November 6, aged 69.

**Henry Arthur Swan** ✠ Abilene, Texas; Baylor University College of Medicine, Dallas, 1914; died recently, aged 58.

**John M. Triplett,** Chapman, Neb.; Lincoln Medical College of Cotner University, 1909; chairman of the board of health; died November 4, aged 78, of arteriosclerosis.

**George Washington Upton,** Sherman, Maine; Dartmouth Medical School, Hanover, N. H., 1888; member of the American Medical Association; past president of the Aroostook County Medical Society; honorary member of the Maine Medical Association and in June 1937 was presented with its fifty-year service medal; died in the Madigan Memorial Hospital, Houlton, November 23, aged 80.

**Walter Volke,** Chicago; University of Chicago School of Medicine, 1939; interned at the Englewood Hospital; died in the Albert Merritt Billings Hospital October 5, aged 37, of coronary occlusion.

**Alva Harding Warren** ✠ Malden, Mass.; Harvard Medical School, Boston, 1900; member of the New England Roentgen Ray Society and the American College of Radiology; specialist certified by the American Board of Radiology, Inc.; died November 19, aged 71, of pulmonary embolism.

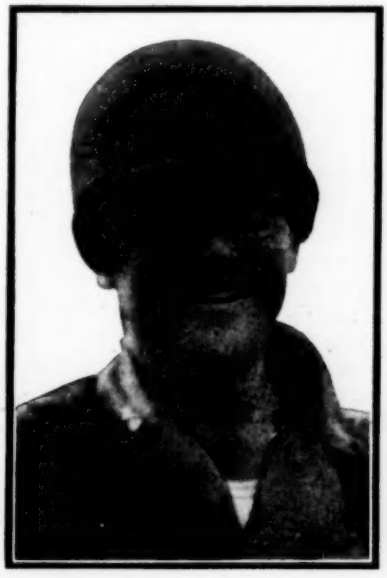
**Ossie Alexander Weatherly,** Bluefield, W. Va.; Baltimore Medical College, 1909; member of the American Medical Association; medical examiner for the Norfolk and Western Railway Company; died November 27, aged 67, of coronary thrombosis.

**Arthur Jay White,** Scranton, Pa.; Hahnemann Medical College and Hospital of Philadelphia, 1923; member of the American Medical Association; formerly assistant superintendent of the Farview State Hospital, Waymart; died November 21, aged 55.

**Charles Alphons Wingerter** ✠ Wheeling, W. Va.; Bellevue Hospital Medical College, New York, 1894; in 1910 member of the House of Delegates of the American Medical Association; past president of the West Virginia State Medical Association, of which he had been an honorary member; served during World War I; member of the board of trustees and member of the staff of the Wheeling Hospital, where he died November 2, aged 79, of cerebral thrombosis.

**De Laniel L. Yost,** Fairmont, W. Va.; Indiana Eclectic Medical College, Indianapolis, 1889; died January 17, aged 84.

CAPT. ALLAN EMMERT MARKOWITZ, M. C., A. U. S., 1916-1944



CAPT. MANNING GUNTER, M. C., A. U. S., 1911-1945

LIEUT. CARL L. MANGO, M. C., A. U. S., 1907-1944

**Ellen Alfleda Wallace** ✠ Concord, N. H.; Woman's Medical College of the New York Infirmary for Women and Children, New York, 1885; president emeritus of the New Hampshire Memorial Hospital, where she died November 2, aged 92, of cerebral thrombosis.

**John Perry Young** ✠ Chester, S. C.; University of Maryland School of Medicine, Baltimore, 1894; Spanish-American War veteran; on the staff of the Pryor Hospital; died in North Charleston November 29, aged 75, of pneumonia and nephritis.

## KILLED IN ACTION

**Allan Emmert Markowitz,** Abilene, Texas; University of Texas Faculty of Medicine, Galveston, 1939; interned at the City Hospital in Cleveland; served a residency at the Bradford Memorial Hospital for Babies in Dallas; began active duty as a first lieutenant in the medical reserve corps of the U. S. Army on July 1, 1941; promoted to captain; killed in action in the North African area Feb. 6, 1944, aged 27.

**Manning Gunter** ✠ Globe, Ariz.; Columbia University College of Physicians and Surgeons, New York, 1938; born in Tucson, Ariz., on May 18, 1911; interned at the New York City Hospital in Welfare Island, New York; began active duty as a first lieutenant in the medical corps, Army of the United States, on May 13, 1942; served in Attu, landing with the first 200 troops; served with Seventh Medical Battalion and Seventh Division through all their campaigns in South Pacific, Leyte and Okinawa; promoted to captain; received Purple Heart and Presidential citation for merit; awarded the Bronze Star Medal "for heroic achievement in connection with military operations against the enemy on Nov. 25, 1944" and the Silver Star "for gallantry in action on May 5, 1945"; killed in action in the Pacific area May 5, 1945, aged 33.

**Carl Louis Mango,** Erie, Pa.; Temple University School of Medicine, Philadelphia, 1937; interned at the York Hospital in York and the Elizabeth General Hospital and Dispensary in Elizabeth, N. J.; began active duty in the medical reserve corps of the Army of the United States as a first lieutenant on March 15, 1941; killed in action in the Philippine Islands Dec. 14, 1944, aged 37, while a prisoner of war of the Japanese government.

# Foreign Letters

## LONDON

*(From Our Regular Correspondent)*

Feb. 9, 1946.

### Coordination of Special Hospitals for the Treatment of Cancer

In order to place its exceptional resources for treatment, teaching and research at the disposal of the patients and staff of other hospitals, and also to obtain a larger number of cases of the less common forms of cancer, the Royal Cancer Hospital has organized a plan for cooperation with London hospitals devoted to other specialties, such as diseases of the chest, eye, ear, nose and throat, gastrointestinal tract and nervous system. Patients referred by a cooperating hospital will be examined by a physician, surgeon, radiotherapist and clinical research assistant. The main lines of treatment will be outlined and the resources of the entire group of hospitals will be available for the patient. Surgical treatment will usually be carried out at the cooperating hospitals, but patients can be freely transferred for surgery, radiotherapy or chemotherapy. Cooperation has been further increased by the appointment of members of the staff of some of the special hospitals to the staff and medical committee of the cancer hospital and the converse. A cooperating hospitals committee has been set up under the chairmanship of Lord Horder to coordinate the cancer work in the group of hospitals and to give advice with regard to its future expansion. The number of new cases seen by the services has already passed 2,000 annually, which corresponds to the normal incidence of cancer in a population of 2,000,000. An important feature of the service is that it has no local limits but is designed to deal with all forms of cancer including the most rare which are selected for treatment at the specialized hospitals.

### Epidemic of Virus B Influenza

An epidemic of influenza has been prevalent in Great Britain for a number of weeks. The weekly records of deaths from the disease have reached the highest level in two years. For the week ended January 26 there were 273 deaths in 126 large cities and 35 deaths in London. As a rule the attacks are mild and not attended by any serious complications. Serologic tests indicate that this epidemic is due to virus B influenza, which has not previously been incriminated in any widespread epidemic, though sporadic cases were found in 1939 and in a minor outbreak in 1943.

### Retropubic Prostatectomy

At the Urological Section of the Royal Society of Medicine Mr. Terence Millin opened a discussion on retropubic prostatectomy, a new operative technic devised by him which was recently described in the *Lancet*. The operation has attracted much attention, since it appears to be an improvement on the many operations for removal of the enlarged prostate. It has the great advantage of being extravesicular, avoiding suprapubic drainage. It takes a relatively short time, does not involve or injure any organ, and has a singularly low mortality. In the 20 cases in which Mr. Millin has operated, there has not been a fatality. As all the obstructing tissue is removed, recurrence of obstruction is obviated.

A median 2½ to 3 inch suprapubic incision is made. The recti are separated and kept so by a modified Harris retractor; the posterior blade of the retractor presses the bladder upward and backward. The veins on the anterior and lateral aspects of the prostate are ligated. With a diathermy knife a transverse incision, convex downward, is made through the prevesical fascia and true prostatic capsule. The false capsule is exposed and an inverted V incision is carried down to the adenoma. The V shaped flap is elevated, and with curved dissecting scissors the lower margins of the lateral lobes of the enlarged prostate and, when present, the middle lobe are freed digitally from below upward. Enucleation is easily performed.

The comments of the urologists were favorable to the new operation. The president of the section, Mr. A. Wilfrid Adams, commended the technic of Mr. Millin, which removed the obstruction to bladder outflow directly. Mr. E. W. Riches praised the principles of direct approach and of enucleation from below but pointed out that the approach was through a vascular area, so that the operation was a bloody one. There was general agreement that the operation was not one for the inexperienced operator.

## PARIS

*(From Our Regular Correspondent)*

Feb. 9, 1946.

### Assistance to Mental Patients—Discussion of a New Law

Mental patients in occupied France were left in asylums to die from starvation and epidemics. The death rate rose 30 to 50 per cent. Immediately after the liberation psychiatric problems and especially the problem of caring for mental patients demanded immediate attention. Their care is still dictated by the law of 1838, which prescribes the confinement of acute and chronic mental patients in asylums.

Since the recognition and development of mental hygiene, there have been in France some wards for psychopathic patients, and in some large cities there are special hospitals and homes, such as the Henri Roussel Hospital, organized by Dr. Toulouse, one of the most prominent defenders of mental hygiene. In 1937 the name "maison d'aliénés" was changed to "psychiatric hospital" without any modification of the methods of treatment.

At a meeting of psychiatrists in which numerous specialists from all over France took part, a resolution for the abolition of the law of 1838 was unanimously adopted. They proposed to replace the "lunatic asylums" with a district (departmental) hospital system containing a security ward for dangerous patients with reeducation homes for alcoholic addicts and other toxicomaniacs and an organization for the placement of patients in families in the country and with medicopedagogic institutions for defective children. The difficulties are technical, as France cannot immediately create a sufficient number of psychiatric hospitals. There is also a shortage of the necessary psychiatrists. The first step is to establish psychiatric wards in the existing hospitals.

A discussion among psychiatrists is now taking place as to the law which should be substituted for the law of 1838. There are two main ideas to be noted among the several submitted to the Ministry of Public Health. The first, worked out by M. D. Abely and a group of psychiatrists, recommends the admission of every mental patient to the psychiatric hospital without any formality. These patients will be given two papers by the attending physician: an application for admission without diagnosis and a sealed letter for the psychiatrist containing the presumable diagnosis. Hospitalized patients will be given complete or restricted liberty, according to their condition. As to the management of their property, the legal forms will be either the appointment of a counselor as provisory administrator or of a trustee. The second plan has been advocated by Dr. Heyer, who in a recent article published in the *Médecin français* proposes that mental patients, with the exception of dangerous cases, should not be subjects of any particular legal measure and should be treated and granted every liberty consistent with their condition. Heyer is relying on his experiences as a psychiatrist practicing for twenty-five years and as official physician to the special infirmary of the Paris prefecture of police. He has found in his private practice that 2 to 3 patients out of 10 must be interned. In his ward at the special infirmary

9 out of 10 must be interned because of insufficient observation. He points to the example of Denmark, where only 2 per cent of mental patients are interned. The author insists that the use of private homes does not increase the danger of mercenary sequestration, so much feared by public opinion; unfortunately, private homes are accessible only to wealthy patients. According to the author the psychiatrist should not be concerned with administrative or legal questions but concentrate on modern treatment in the psychiatric wards which he proposes to organize in each district hospital. The new law will be incorporated in the new constitution, which is now being prepared by the Constitutional Assembly.

### High Death Rate of Nurslings

Levesque and Bastin have called attention to the high death rate of babies under 1 year of age. This fact was also emphasized by the statistician Moine in his work entitled "Infancy in Danger," which indicated congenital weakness and premature birth as main causes of the high rate of infant mortality. The frequency of premature births has been pointed out by various authors, among them Dufour, medical inspector of the Bouches-du-Rhône district, who read a paper on this subject recently at a meeting of the congress for the Advancement of Science.

## THE NETHERLANDS

*(From Our Regular Correspondent)*

AMSTERDAM, Jan. 31, 1945.

### War Against Children

Infant mortality was exceptionally low in the prewar Netherlands. Individual hygiene and medical care must be credited for this progress during the last forty years. The Germans thoroughly altered this and performed a planned campaign against 20,000 Jewish children. Amsterdam pediatricians have medically evaluated the results of this cruelty. The first stage in the action was deportation to pooling camps. There an average of 200 mothers with infants were crowded into barracks without sanitation or ventilation. In smaller rooms 60 infants with a variety of diseases or infections were confined. Personnel, all prisoners, had to sleep and live in the same rooms. Unwashed towels were dried in the same room where "lavatories" stood, which were mortuary and kitchen at the same time. In the ward were children with whooping cough, measles, scarlet fever, malignant dysentery, pneumonia, nasopharyngitis and otitis media. They were starved rather than fed with food exposed to flies, coming from uncovered sick children, several of them in the same bed, without blankets or sheets. This was a major experiment to see what would happen after exposure to instead of isolation from various diseases prevalent among children. Efficient medical aid was forbidden, and even the mothers were prohibited from attending their dying little ones. As a result of this remarkable experiment most children began to be ill with dysentery of the Flexner type and to contract all the other diseases in varying sequence. Yet the death rate seemed too low; suddenly all the children were packed into trains, despite pyrexia up to 104 F. with pneumonia, even a 5 day old baby of 3 pounds (1,350 Gm.), and deported to Poland, where those who arrived living were murdered in the gas chambers. Enteric disease was the most frequent disease in the camps (doctors were not allowed to investigate for differential diagnosis) and otitis with mastoiditis.

Among the children of Amsterdam the death rate began to mount in 1944, owing to enteritis and to starvation of babies or to overfeeding with inadequate food. Mortality reached five times the normal level. Exact information is not available as to the nature of the enteric disease, although it might be related to epidemics that raged or still exist in western Europe. Liver damage was rather constant and a relation to a plague of flies apparent.

Other diseases of children were dystrophies due to starvation, but edema was exceptional in comparison with the adults. Serious war sequels are tuberculosis of children in increased frequency and congenital syphilis, reappearing now, whereas it had been almost extinct in the prewar Netherlands.

## BELGIUM

*(From Our Regular Correspondent)*

Feb. 11, 1946.

### International Committee of Military Medicine and Pharmacy

A meeting of the International Committee of Military Medicine and Pharmacy was held in Brussels Nov. 19 and 20, 1945. The International Committee accepted the invitation of the Swiss Federal Government to hold the eleventh congress in Switzerland in 1947. The following subjects were on the program of this congress: 1. Methods of resuscitation of the injured; reporters, England, France and Jugoslavia. 2. General review of modern procedures for prophylaxis of epidemic diseases in armies; reporters, the United States, Switzerland and Great Britain. 3. Modern methods of evacuation of the wounded and sick: indications and contraindications; reporters, Canada, Russia and Poland. 4. Participation of military physicians in the moral and physical welfare of the soldier; reporters, Belgium, France and Switzerland. 5. Comparative study of methods and apparatus for the determination of the hydrogen ion concentration with a view of their employment in the pharmaceutical laboratories of armies; reporters, Switzerland, France and Brazil. The following resolution was sent to the International Committee of the Red Cross in Geneva: "The International Committee of Military Medicine and Pharmacy meeting on Nov. 19, 1945 in Brussels begs the International Committee of the Red Cross to examine the question of medical personnel of armies protected by the Geneva Convention who are still in captivity and to use its great influence in their interest. It appears indeed opportune to consider with a purely disinterested and humanitarian aim the release of physicians and medical personnel who remain prisoners, who have been prisoners for a long time and who have not failed in their soldierly duties and honor."

### The Health Control of Workers

A regent's decree will soon be published which regulates medical service in industrial enterprises. Beginning January 1 all enterprises (industrial, commercial and public service) must provide at their own expense medical service consisting of a complete examination at the time of hiring (analyses and roentgenologic examinations) and a periodic examination of the working personnel. The examination of adolescents is to take place every year and is to be carried out in the same manner as at the time of first employment. For adult workers examinations at variable intervals are permissible, depending on the type of employment. The interval may vary from one month to two years. The physician must make out an individual report after each examination. He has at his disposal for this purpose special and not very complicated forms. A copy of this report comprising the medical observations and especially the diagnosis is sent to the provincial health inspector. The employer is not to know the nature of the disorder detected in a member of his personnel. The physician must likewise keep a health record which must accompany the worker throughout his life as a worker. The employer has free choice of a medical examiner. He can, however, be put under obligation to change him at the request of the worker's physician in cases in which the medical examiner "does not observe the instructions concerning the health control of the workers or refuses to furnish the administration with information which is necessary to assure the observation of the prescriptions of the present decree."

## MEXICO

*(From Our Regular Correspondent)*

Jan. 5, 1946.

### Eradication of Smallpox in Mexico

During the conquest of Mexico smallpox was introduced by a Negro slave named Francisco Eguía, who came with the forces of Panfilo de Narvaez sent from Cuba to fight and punish Hernán Cortés. Since that time Mexico has paid a heavy toll. The "cocoliztli," as it was called by the Aztecs, has caused millions of deaths. Baron Alejandro von Humboldt stated that the disease killed more Indians than the cannons and muskets of the Spaniards. According to this author the number of deaths caused by smallpox amounted to two millions during the period of 1555-1556 in the territory occupied now by the Federal District and the states of Mexico, Michoacan, Puebla and Oaxaca. Subsequently several local epidemics were registered in the different parts of New Spain. The most important ones were those which occurred in 1763-1769, 1779, 1798, 1814 and 1829. Later, since the introduction of the Jenner vaccine on July 24, 1804 by Dr. Francisco Xavier de Balmis and Dr. Antonino Gutierrez the different governments have been fighting the plague with relative success. During the preceding and present administrations, smallpox has been attacked intensively in such a way that at the present time it is almost absent. In some states such as Yucatán, Campeche, Chiapas, Tabasco and others in the southeast not 1 case has been registered during the last five years.

*Mortality Rate for Smallpox in Mexico*

| Year | Population (Calculated) | Number of Deaths | Rate per 100,000 |
|---|---|---|---|
| 1940 | 19,750,112 | 1,341 | 6.8 |
| 1941 | 20,075,793 | 2,529 | 12.6 |
| 1942 | 20,392,473 | 4,115 | 20.2 |
| 1943 | 20,709,154 | 3,738 | 18.0 |
| 1944 | 21,025,835 | 2,252 | 10.8 |
| 1945 | 21,342,516 | 813 | 3.8 |

The mortality rate for smallpox during the last six years in Mexico is given in the accompanying table.

The mortality rate up to November 1945 was 0 to 5 per hundred thousand inhabitants in the Federal District, the territories and twenty-four states, 5.1 to 10 in Nayarit and Jalisco, 20 in the state of Hidalgo and 30 per hundred thousand of population in the state of Guanajuato in the central plateau.

Since the middle of 1945 not a single case of smallpox has been reported in many states, although vaccination was quite difficult in the mountainous regions and native villages. The immunization rate varies from 90 per cent in the urban districts to 60-70 per cent among the rural population. The public health and welfare authorities hope to banish smallpox forever during the first quarter of 1946.

### Whooping Cough Immunization

Whooping cough is considered in Mexico a major cause of death of patients over 9 years of age. The disease kills in this country fourteen times more children than diphtheria, seven times more than smallpox, typhoid and syphilis and one and a half times as many as measles and bronchitis. During the four years ended December 1944 Dr. Miguel F. Bustamante, in charge of the Laboratory of Epidemiology and Biostatistics of the Institute of Public Health and Tropical Diseases, carried on a series of experimental immunizations against pertussis, using 7 cc. of Kendrick's vaccine in treating a group of 982 children. Another group of 589 children was used as a control. The environmental, social and living conditions were the same for the two groups. The average age among the children in the immunized group was 19.49 months and in the control group 20.19. The mean duration of the experiment was 21.74 and 21.99 months for each group respectively. The mean number of members per family was 5.3 and 5.2. According to the studies made, the results obtained by Dr. Bustamante and his co-workers were 1.92 person-months attacks per hundred months' experience in the immunized children against 8.66 in the control group, i. e. a difference of 6.74 ± 0.18, which is significant. The rate of attack per year in the first group was 1.8 against 5.8 in the control group. In this experiment the effective protection among vaccinated children was 75 per cent, with an annual attack rate of 2.8 per cent as compared to 5.5 per cent in the second group.

### Committee for the Standardization of Laboratory Methods

A meeting was held on January 3, 1946 in the office of the undersecretary of public health and welfare to appoint a committee for the standardization of laboratory procedures. The committee appointed consists of the following section chairmen: Dr. Gustavo Argil, Section of Pathologic Biochemistry; Dr. Ernesto Cervera, director of the Institute of Hygiene, Section of Microbiologic Methods and Technics; Dr. Manuel Martínez Baez, Clinical Pathology; Dr. Ignacio González Guzmán, dean of the National School of Medicine, Hematology; Dr. Tomas G. Perrin, Serology, and Dr. Fernando Ocaranza, chief of the Division of Laboratories, Public Health Laboratories. Dr. Manuel Martínez Baez, Undersecretary of Public Health and Welfare, will act as president.

### Courses in the School of Public Health and Hygiene

On December 17 in the Auditorium of the National School of Public Health and Hygiene, the annual ceremony to close the activities of the academic year took place, presided over by Dr. Gustavo Baz, secretary of public health and welfare. The speakers included Dr. Manuel Martínez Baez, undersecretary of public health and welfare, Dr. Angel de la Garza Brito, dean of the National School of Public Health and Hygiene, and Dr. Ernesto Molina of Colombia. Degrees of Master of Public Health were granted to nineteen students (five from Colombia), and certificates of attendance were given to ninety-seven public health nurses, thirty-four sanitary inspectors and nine physicians who attended a short course on malariology.

## Marriages

STANLEY H. HOFFMAN, Glenn Dale, Md., to Wave Lieut. (jg) Teresa R. Blumberg of Terre Haute, Ind., in Washington, D. C., December 29.

CHARLES MONROE LANDMESSER, Lakeland, Fla., to Miss Jessie Norwood Jeffers in Florence, S. C., November 3.

EMORY CLIFTON KINDER, Kingstree, S. C., to Mrs. Hilda Whitaker Purse of Chattanooga, Tenn., recently.

CHARLES KENDALL DONEGAN to Miss Margaret Graham Mangum, both of Durham, N. C., January 19.

MELVIN L. PETERS, Cameron, Mo., to Miss Gussie Gearhart of Princeton in Troy, Kan., December 24.

JOHN ALBERT REINECK, Norwalk, Ohio, to Miss Rosemary Brennan of Pacific, Mo., in November.

WAYNE JOHN FENCIL, Monroe, Wis., to Miss Mary Jane Doherty in Milwaukee, December 26.

GEORGE S. KING to Miss Ruth C. Kahler, both of Bay Shore, N. Y., at Great Neck, January 10.

ALBERT H. VOEGELE to Miss Elaine Marie Schiller, both of Mansfield, Ohio, December 1.

EVANS WILLIAM PERNOKIS, Chicago, to Miss Olga Stuart of New York, December 30.

SOL Z. DRAZNIN, Chicago, to Miss Esther Bishop of Green Bay, Wis., January 3.

HERMAN L. KRETSCHMER to Mrs. Marion Elien Hicks, both of Chicago, March 3.

FREDERICK G. GAENSLEN, Milwaukee, to Miss Jeanne Sweet of Madison recently.

# Correspondence

## REFRIGERATION FOR CRUSHED FINGER

*To the Editor:*—In THE JOURNAL, Dec. 29, 1945, page 1296, an adverse reply is given to a navy lieutenant who inquired concerning his application of ice to a finger which had been crushed and nearly amputated. The theory contained in the reply seems fallacious, as cold preserves tissue by reducing its metabolism and diminishing the need for either arterial or venous circulation. It is also contrary to the unanimous experience in major surgery, such as the English adoption of refrigeration for crush injury of limbs, and the preservation of circulation or development of collateral circulation during weeks of icing (Mock; Nachlas; Crossman; Ottaway and Foote; literature by Allen, F. M.: *Am. J. Surg.* **68**:170 [May] 1945). The only 2 minor cases which I have encountered have been successful, as follows:

An Italian laborer aged 64 had his thumb nearly severed at the interphalangeal joint, the distal phalanx hanging only by a thin shred of skin. The doctor who saw him for me in my absence inquired if he should complete the amputation, but I advised by telephone to place the hand in a basin of cracked ice. Four hours later the parts were united by suture without drainage. The thumb was kept in ice for twenty-four hours and then changed to ice bags, which were gradually withdrawn during four days. The result was a complete functional thumb except for ankylosis of the interphalangeal joint.

A girl aged 5 years had her left ring finger chopped off with a hatchet. The cut was through the middle phalanx, and here also nothing but a thin bridge of skin remained. When I first saw the patient six hours after the accident, the severed part appeared very cyanotic and cadaveric. After suture, the finger was packed in ice for thirty-six hours by a unique method. The mother cut a hole in a rubber fountain syringe, so that the child's hand could be inserted and surrounded with ice, while the melting water drained out through the tubing into a pail on the floor. During the following days the important principle of gradual elevation of temperature was applied by using ice bags which were successively withdrawn. The outcome has been a perfect finger except for limitation of motion in the distal phalanx, which observers expect to be lessened by exercise and time.

It appeared improbable that the digit in either of these cases could have been saved by customary measures. As it is unreasonable to expect invariable success with any method, it seems proper to ask the lieutenant's critics whether any of them have any personal experience with reduced temperature or whether they know of any instance of deleterious effects from its proper use.

LYMAN WEEKS CROSSMAN, M.D., New York.

## MEDICAL SURPLUS PROPERTY

*To the Editor:*—For your information the following: Being on terminal leave after five years of active duty and in need of equipment for my office, I took THE JOURNAL at its word and very optimistically made a visit to the Los Angeles branches of the Smaller War Plants Corporation, the War Assets Corporation, the Office of Surplus Property RFC et al. with the following results:

Page 282 of THE JOURNAL for February 2 gave the regional office as Pacific Mutual Building, Los Angeles. Arrival there disclosed a palatial setup with high powered appearing executives, as far as the eye could reach, ensconced behind heavy plate glass and mahogany. They could be seen only by appointment, I was informed by one of the young lady buffers holding forth at the mahogany barrier. On learning my business, however, she informed me that THE JOURNAL was 100 per cent wrong and that it would be necessary for me to go to another building in another part of town which specialized in surplus medical equipment. This building was situated on Seventh Street near Los Angeles Avenue.

This information was a lift, because that was just what I was looking for, the boys who specialized in medical equipment, just like THE JOURNAL said.

Now this office was a letdown after viewing the splendor of the other one, but there were long lines of veterans waiting to be seen and, I thought, now we are getting some place. As I got closer to the front of the line, though, my spirits sagged as I noticed those turned away from the desk sadly shaking their heads and muttering to themselves as they filed past. I consoled myself with the thought that these poor misguided unfortunates were no doubt in the wrong place trying to buy silly things like locomotives, amphibious adding machines and bulldozers; they should know that they ought to be up at the swank joint in the Pacific Mutual Building. I was now all goose pimples; I was only third man from the front, which gave me a chance to observe the gal behind the counter. She looked harassed and bedraggled, but it was almost noon and no doubt the poor girl was weak from hunger. But when my turn came she was still breathing, so I took a chance.

Now I hate to tell you this, Mr. Editor, but this gal said she didn't know where THE JOURNAL got its information, but there was no such thing as a listing of surplus medical equipment and, what's more, she doubted if there ever would be one. In spite of her weakened condition she was not unsympathetic, and she lowered her voice to tell me that this was the way it always was and so I gathered that it was just the same old runaround being given veterans everywhere. She did suggest that I could return that afternoon when a group class would be held on how to make an application, and I could then apply for the items I might be interested in. Then some day if they ever got those items they would notify me within the next few months.

I started to say "how the h—— can I make application when I don't know what you have for sale," but I thought better of it and decided to go back to the plush carpeted office in the Pacific Mutual Building, where the girls were better looking, and buy myself a tank or a small used destroyer at least.

JAY G. WANNER, Lieutenant Colonel, M. C., A. U. S.

## CONTROLLED FOLLOW-UP STUDIES IN PSYCHIATRY

*To the Editor:*—The method of controlled follow-up studies is not utilized sufficiently in medical science. If it were, the literature would be burdened with far less unsubstantiated therapeutic claims and other so-called discoveries. Psychiatry, for many years backward as compared to the progress made in other medical specialties, is now utilizing this method more frequently. Such a study made by a New York commission to evaluate the effects of insulin shock therapy in schizophrenia was discussed in a recent issue of THE JOURNAL (Feb. 10, 1945, p. 334). Recent studies on convulsive shock therapy in the affective psychoses (manic-depressive and involutional melancholia) reveal important data not previously known, which would not have become available except by the utilization of controls (Ziskind, Eugene; Somerfeld-Ziskind, Esther, and Ziskind, Louis: Metrazol and Electric Convulsive Therapy of the Affective Psychoses, *Arch. Neurol. & Psychiat.* **53**:212 [March] 1945. Tillotson, K. J., and Sulzbach, Wolfgang: A Comparative Study and Evaluation of Electric Shock Therapy in Depressive States, *Am. J. Psychiat.* **101**:455 [Jan.] 1945).

It is especially important that the control and treated series include cases seen by the same investigators over the same period and under the same conditions since, particularly in the psychiatric field, diagnostic and therapeutic interpretations vary so much from person to person, place to place and time to time,

and also since the selection of material often varies. The worst cases are segregated in state hospitals, whereas in private practice mixed degrees of severity are encountered.

In such a control series from the private practice of myself and associates, consisting of 88 treated and 109 untreated patients over a five year period, and contacted subsequently (the follow-up period averaged three and one-fourth years), successfully treated patients recovered in a much shortened period of time (three to six weeks) and the adequately treated patients were prevented from dying from suicide and exhaustion, whereas 12 per cent in the control series did die. It is of more than theoretical interest that, once the fatal cases were excluded from the series, the follow-up showed that just as many of the untreated cases (86 per cent) as the treated cases (88 per cent) automatically went on to recovery of the individual attack, although the duration of the illness was much longer in the untreated cases. Another revelation of the follow-up controlled study was the equality of the number of recurrences in both the treated and untreated cases (18 and 21 per cent respectively), demonstrating that, although the treatments are beneficial in shortening the individual attack of the manic-depressive psychoses, there is no effect on later recurrences. Another follow-up investigation (Tillotson and Sulzbach) on 138 cases of depression revealed a greater recovery rate in the 70 treated than in the 68 untreated cases. Discrepancies in the two studies were more apparent than real, for in the first the controls included many patients whose illness was considered too mild to treat. When correction was made for this factor (comparison restricted to those control cases in which treatment was recommended but refused) and the deceased patients were not excluded from the control series, the increase of individual recoveries in the treated cases approximated the second study.

These reports indicate the value of control follow-up series. Though admittedly difficult and often containing many variable factors, they still constitute the best known approach to evaluation of new therapies. More such studies will lead to refinement of technic and statistical computation, reducing the differences arising from the variable selection of material.

EUGENE ZISKIND, M.D., Los Angeles.

## "THE PELLAGRA PROBLEM"

*To the Editor:*—I have read your editorial on "The Pellagra Problem" (THE JOURNAL, Nov. 24, 1945, p. 874) with great interest. You mention the suggestion by Krehl, Teply, Sarma and Elvehjem (*Science* **101**:489 [May 11] 1945) "that the synthesis of niacin by the intestinal flora may be involved." You do not mention that production and release of nicotinamide by the intestinal flora in man has been shown by myself and my co-workers (Ellinger, P., and Coulson, R. A.: *Biochem. J.* **38**:265 [No. 3] 1944. Ellinger, P.; Coulson, R. A., and Benesch, R.: *Nature* **154**:270 [Aug. 26] 1944. Ellinger, P.; Benesch, R., and Kay, W. W.: *Lancet* **1**:432 [April 7] 1945. Ellinger, P.: *Nature* **155**:319 [March 17] 1945); up to 100 per cent (in the average 60 per cent) of the daily nicotinamide requirements of man can be synthesized by the flora of the intestinal tract; the obvious conclusions concerning the etiology and cure of pellagra have been discussed in the papers mentioned.

I am surprised that your editorial writer had not noticed these papers, which have received publicity in editorials in the *Lancet* and *British Medical Journal* and also one by American workers (Briggs, A. P.; Singal, S. A., and Sydenstricker, V. P.: *J. Nutrition* **29**:331 [May] 1945) in which the same function of the intestinal flora is suggested. In the interest of chronological accuracy I think these omissions should be noted in the pages of THE JOURNAL.

P. ELLINGER,
Lister Institute of Preventive Medicine,
London, S.W. 1.

# Medical Examinations and Licensure

## COMING EXAMINATIONS AND MEETINGS

### NATIONAL BOARD OF MEDICAL EXAMINERS EXAMINING BOARDS IN SPECIALTIES

Examinations of the National Board of Medical Examiners and the Examining Board in Specialties were published in THE JOURNAL, March 2, page 601.

### BOARDS OF MEDICAL EXAMINERS

ALABAMA: Mar. 19-21. Sec. Dr. B. F. Austin, 519 Dexter Ave., Montgomery 4.

ARIZONA: * *Examination.* Phoenix, April 2-3. *Endorsement.* Phoenix, April 6. Sec., Dr. J. H. Patterson, 826 Security Bldg., Phoenix.

ARKANSAS: * *Medical.* Little Rock, June 6-7. Sec., Medical Board of the Arkansas Medical Society, Dr. L. J. Kosminsky, Texarkana. *Eclectic.* Little Rock, June 6. Sec., Dr. C. H. Young, 1415 Main St., Little Rock.

CALIFORNIA: *Written.* Los Angeles, March 11-14. Sec., Dr. Frederick N. Scatena, 1020 N St., Sacramento 14.

COLORADO: * Denver, April 2-5. Final date for filing application is March 18. Sec., Dr. J. B. Davis, 831 Republic Bldg., Denver.

CONNECTICUT: * *Medical. Examination.* New Haven, March 12-13. *Endorsement.* New Haven, March 26. Sec. to the Board, Dr. Creighton Barker, 258 Church St., New Haven. *Homeopathic.* Derby, March 12-13. Sec., Dr. Joseph H. Evans, 1488 Chapel St., New Haven.

DELAWARE: *Examination.* Dover, April 9. *Reciprocity.* Dover, April 16. Sec., Medical Council of Delaware, Dr. J. S. McDaniel, 229 S. State St., Dover.

DISTRICT OF COLUMBIA: * *Reciprocity.* Washington, March 11. Sec., Commission on Licensure, Dr. G. C. Ruhland, 6150 E. Municipal Bldg., Washington 1.

FLORIDA: * Jacksonville, June 24-25. Sec., Dr. Harold D. Van Schaik, 2736 S.W. Seventh Ave., Miami 36.

GEORGIA: Atlanta and Augusta, March 27-28. Sec., State Examining Boards, Mr. R. C. Coleman, 111 State Capitol, Atlanta 3.

HAWAII: Honolulu, July 8-11. Sec., Dr. S. E. Doolittle, 881 S. Hotel St., Honolulu 53.

IDAHO: Boise, July 9. Dir., Bureau of Occupational Licenses, Miss Agnes Barnhart, 355 State Capitol Bldg., Boise.

ILLINOIS: *Examination.* Chicago, April 2-3. *Reciprocity.* Chicago, April 4. Supt. of Registration, Department of Registration & Education, Mr. Philip Harman, Springfield.

INDIANA: Indianapolis, April 25-27. Sec., Board of Medical Registration & Examination, Dr. W. C. Moore, 301 State House, Indianapolis 4.

IOWA: * Iowa City, March 25-27. Dir., Division of Licensure & Registration, Mr. H. W. Grefe, Capitol Bldg., Des Moines 19.

KANSAS: Kansas City, March 12-13. Sec., Board of Medical Registration and Examination, Dr. J. F. Hassig, 905 N. Seventh St., Kansas City 10.

KENTUCKY: Louisville, March 25-27. Sec., State Board of Health, Dr. Philip E. Blackerby, 620 S. Third St., Louisville 2.

MAINE: Portland, March 12-13. Sec., Board of Registration of Medicine, Dr. A. P. Leighton, 192 State St., Portland.

MARYLAND: *Medical.* Baltimore, March 19-22. Sec., Dr. J. T. O'Mara, 1215 Cathedral St., Baltimore 1. *Homeopathic.* Baltimore, June 18-19. Sec., Dr. J. A. Evans, 612 W. 40th St., Baltimore.

MASSACHUSETTS: Boston, March 12-15. Sec., Board of Registration in Medicine, Dr. H. Q. Gallupe, 413-F State House, Boston.

MICHIGAN: * Detroit, March 26-28. Sec., Board of Registration in Medicine, Dr. J. E. McIntyre, 100 W. Allegan St., Lansing 8.

MISSISSIPPI: June. Asst. Sec., State Board of Health, Dr. R. N. Whitfield, Jackson 113.

MONTANA: Helena, April 1-3. Sec., Dr. O. G. Klein, First National Bank Bldg., Helena.

NEBRASKA: * Omaha, March 25-27. Dir., Bureau of Examining Boards, Mr. Oscar F. Humble, 1009 State Capitol Bldg., Lincoln 9.

NEW JERSEY: Trenton, June 18-19. Sec., Dr. E. S. Hallinger, 28 W. State St., Trenton.

NEW MEXICO: * Santa Fe, April 8-9. Sec., Dr. LeGrand Ward, 141 Palace Ave., Santa Fe.

NEW YORK: Albany, Buffalo, New York and Syracuse, June 24-27. Sec., Dr. Jacob L. Lochner, Education Bldg., Albany.

NORTH CAROLINA: Raleigh, March 25-28. Act. Sec., Mrs. Louise J. McNeill, 226 Hillsboro St., Raleigh.

NORTH DAKOTA: Grand Forks, July 2-5. Sec., Dr. G. M. Williamson, 4½ S. Third St., Grand Forks.

OHIO: *Examination.* Columbus. March 19-22. Sec., Dr. H. M. Platter, 21 W. Broad St., Columbus.

OKLAHOMA: * Oklahoma City, March 23. Sec., Dr. J. D. Osborn Jr., Frederick.

PENNSYLVANIA: Philadelphia and Pittsburgh, April. Act. Sec., Bureau of Professional Licensing, Department of Public Instruction, Mrs. M. G. Steiner, 351 Education Building, Harrisburg.

RHODE ISLAND: Providence, April 4-5. Chief, Division of Examiners, Mr. Thomas B. Casey, 366 State Office Bldg., Providence.

SOUTH DAKOTA: * Pierre, July 16-17. Sec., Medical Licensure, State Board of Health, Dr. Gilbert Cottam, Capitol Bldg., Pierre.

TENNESSEE: * Memphis and Nashville, March 27-29. Sec., Dr. H. W. Qualls, 130 Madison Ave., Memphis 3.

TEXAS: Austin, March 27-29. Sec., Dr. T. J. Crowe, 918-20 Texas Bank Bldg., Dallas 2.

VERMONT: Burlington, March or April. Sec., Dr. F. J. Lawliss, Richford.

VIRGINIA:* Richmond, March 25-28. Sec., Dr. J. W. Preston, 803 Medical Arts Bldg., Roanoke.

WASHINGTON:* Seattle, July 11-12. Sec., Department of Licenses, Miss Nell Adams, Olympia.

WEST VIRGINIA: Charleston, April 1-3. Commissioner, Public Health Council, Dr. John E. Offner, State Capitol, Charleston 5.

* Basic Science Certificate required.

**BOARDS OF EXAMINERS IN THE BASIC SCIENCES**

DISTRICT OF COLUMBIA: Washington, April 22-23. Sec., Commission on Licensure, Dr. G. C. Ruhland, 6150 E. Municipal Bldg., Washington 1.

FLORIDA: Gainesville, June 4. Final date for filing application is May 20. Sec. Dr. J. F. Conn, John B. Stetson University, DeLand.

IOWA: Des Moines, April 9. Dir., Division of Licensure & Registration, Mr. H. W. Grefe, Capitol Bldg., Des Moines 19.

MICHIGAN: Ann Arbor and Detroit, May 10-11. Sec., Miss Eloise LeBeau, 101 N. Walnut St., Lansing.

MINNESOTA: Minneapolis, April 2-3. Sec., Dr. Raymond N. Bieter, 126 Millard Hall, University of Minnesota, Minneapolis 14.

NEBRASKA: Omaha, May 7-8. Dir., Bureau of Examining Boards, Mr. Oscar F. Humble, 1009 State Capitol Bldg., Lincoln 9.

SOUTH DAKOTA: Vermillion, March 13-14. Sec., Dr. G. M. Evans, Yankton.

TENNESSEE: Memphis and Nashville, March 25-26. Sec., Dr. O. W. Hyman, 874 Union Ave., Memphis.

WISCONSIN: Madison, April 6. Prof. R. N. Bauer, 152 W. Wisconsin Ave., Milwaukee 3.

# Bureau of Legal Medicine and Legislation

## MEDICOLEGAL ABSTRACTS

**Malpractice: General Release of Primary Cause of Action Held Release of Claim of Intervening Malpractice.**—The plaintiff physician filed suit for a declaratory judgment as to the legal effect of a general release which the defendant executed in favor of the Minneapolis Street Railway Company in settlement for injuries received in a street car accident. From a judgment in favor of the physician the defendant appealed to the Supreme Court of Minnesota.

The defendant was injured while alighting from a street car and engaged the plaintiff physician to treat her injuries. Part of the treatment involved the use of an electrical apparatus and defendant claimed she received burns therefrom. In a subsequent action against the street car company, after a verdict in her favor, she entered into a stipulation by the terms of which she released and discharged the street car company "from all claims, demands, actions or causes of action, for all injuries or damages, whether at this time known or unknown, arising or to grow out of the said accident referred to above." In neither the pleading nor trial of that case did the defendant mention any burns she suffered as a result of the plaintiff's negligence. Prior to the termination of her suit against the street car company, the defendant commenced a malpractice action against the plaintiff. After the stipulation in the street car company case was filed, the plaintiff filed an amended answer in the malpractice action to the effect that the release to the street car company released the defendant's whole cause of action, including the claim for malpractice against the plaintiff. Subsequently, by means of various proceedings to which the plaintiff was not a party, the defendant attempted to avoid the effect of her general release. Plaintiff therefore filed this suit for a determination of the rights of the parties.

The Supreme Court said that where one person is injured by the wrong or negligence of another, and the injured person himself is not negligent in the selection of a medical attendant, the wrongdoer is liable for all the proximate results of his own act, although the consequences of the injury would have been less serious than they proved to be if the attendant had exercised proper professional skill and care. The defendant admitted that such was the law but urged that this case was an exception. She argued that since, in the street car case, no claim or mention was made of any burns received during the treatment for her injuries, therefore the only recovery that she made against the street railway company was for the injuries she sustained through the negligence of the company and consequently the release and satisfaction could not possibly have included the injuries for malpractice. She suggests that the basis for the rule set forth by the court is to prevent one person from recovering twice for the same injury, and that in this case no basis for the rule exists since she could not possibly recover for the same injury because she refrained from claiming or proving aggravation of her injuries through malpractice.

The Supreme Court admitted that the defendant presented a plausible argument but pointed out that her general release operated not only in personam on the street car company and its liability but also in rem on her own cause of action. The decisive thing now, said the court, is not whether the plaintiff actually released this defendant, or intended to do so, or got full compensation, but rather and only whether she has discharged her whole cause of action. This, concluded the Supreme Court, she did do. If the instrument is in fact a release, it discharges all parties liable for the injury. If, in such a case as this, it is desired to come to an accommodation with the original wrongdoer, saving to the injured person a cause of action, if any, against the attending physician or surgeon, it may be done by the use of a convenant not to sue. Accordingly the judgment of the trial court in favor of the plaintiff was affirmed.—*Benesh v. Garvais, 20 N. W. (2d) 532 (Minn., 1945).*

**Life Insurance: Physical Manifestations of Sunstroke Not Visible Wounds or Contusions.**—The plaintiff sued to recover under the double indemnity provisions of a life insurance policy issued to her deceased husband, who died as the result of a sunstroke. From a judgment in her favor the defendant insurance company appealed to the circuit court of appeals, tenth circuit.

The policy provided that

> If the death of the insured . . . results directly and independently of all other causes from bodily injuries effected solely through external, violent and accidental means, . . . and if such accident . . . is evidenced by a visible contusion or wound on the exterior of the body, the sum insured provided on the first page of the attached policy will be doubled.

According to the agreed facts the deceased, shortly before he died, became pale, remarked that he felt a "hot spell or something" coming over him and immediately went to bed. His clothes were wet with perspiration and he complained of smothering to death and of pains in his arms. His face was a pale yellow, his lips were blue and swollen, his eyes were glassy and the pupils dilated, he vomited blood, and hot fluid flowed from his nose. Just before death occurred his "skin had turned blue practically all over his body."

Under established Oklahoma law, the court pointed out, it is well settled that sunstroke is an accident effected solely through external, violent and accidental means. The question is whether or not the facts show a "visible contusion or wound on the exterior of the body." The court pointed out that in many of the cases relied on by the plaintiff the insurance policy required a "visible mark or evidence of injury" or language meaning substantially that. Under such a proviso, said the court, we would have no difficulty in concluding that there were visible marks and evidence of an injury. The insurance policy in question, however, requires a "wound" or "contusion" on the exterior of the body. The words "wounds" and "contusions," concluded the court, have well defined and understood meanings. The commonly understood and accepted meaning of the word "wound" is an injury to a person in which the skin or other membrane is broken, as by violence or surgery. "Contusion" is commonly defined as a bruise affecting subcutaneous tissue without breaking the skin. "Contusion," in its ordinarily accepted meaning, is synonymous with "bruise." It is difficult to think of pallor, perspiration, dilated pupils or a bluish tint to the skin immediately preceding death, said the court of appeals, as either wounds or contusions. To so hold would, in our opinion, do violence to the ordinarily accepted meaning of these terms as they are understood by intelligent persons. Accordingly the judgment in favor of the plaintiff was reversed and the cause remanded with direction to enter judgment in favor of the insurance company.—*Paul Revere Life Insurance Company, Worcester, Mass., v. Stanfield, 151 F. (2d) 776 (1945).*

# Current Medical Literature

## AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1936 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied by stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested). Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

### American Heart Journal, St. Louis

**30**:427-538 (Nov.) 1945

*Syndrome of Bernheim. H. I. Russek and B. L. Zohman.—p. 427.
Peripheral Vascular Changes in Dermatomyositis. J. J. Silverman and V. E. Powell.—p. 441.
The Recruit's Heart: Reduplication of First Sound: Heart Strain and New Method of Calibration. J. S. Lewis.—p. 447.
*Traumatic Injury of Heart: Incidence of Occurrence in 42 Cases of Severe Accidental Bodily Injury. L. H. Sigler.—p. 459.
*Studies Concerning the Etiology and Pathogenesis of Neurocirculatory Asthenia: III. Cardiovascular Manifestations of Neurocirculatory Asthenia. M. Friedman.—p. 478.
Pulmonary Stenosis with Intact Interventricular Septum: Report of 11 Cases. J. H. Currens, T. D. Kinney and P. D. White.—p. 491.
Note on Serologic Classification of Streptococci Isolated from Subacute Bacterial Endocarditis. S. M. Wheeler and G. E. Foley.—p. 511.

**Syndrome of Bernheim.**—Russek and Zohmann present observations on 3 cases of Bernheim's syndrome, 2 of which were diagnosed during life and confirmed at necropsy and 1 discovered on postmortem examination. The diagnosis is suggested when a person with left ventricular hypertrophy shows signs of right heart failure as the first indication of circulatory embarrassment. The "right heart failure" is not due to myocardial weakness but results from obstruction to blood flow through the right ventricle. Dyspnea and other signs of pulmonary congestion are conspicuously absent or minimal until the terminal stage of the disease, when failure of the left ventricle finally supervenes. The circulation time may remain within normal limits for some time while the venous pressure is appreciably elevated. Fluoroscopy may be helpful in demonstrating enlargement of the left ventricle and right auricle with normal size of the other two chambers. The bulging and thickened interventricular septum may influence the electrical axis of the heart and even be responsible for unexpected right axis deviation in cases of left ventricular hypertrophy. The syndrome of Bernheim may occur in any condition causing left ventricular hypertrophy and dilatation.

**Traumatic Injury of Heart in Bodily Injuries.**—Sigler studied 39 cases of accidental injuries of the body in admissions to the surgical wards of the Coney Island Hospital and in 3 cases from other sources. In 32 of these 42 cases there was demonstrable evidence of some cardiac damage, clinical, electrocardiographic or both. In some cases the damage occurred even if the blow did not affect the chest, provided it was of sufficient severity to result in grave bodily injury. In most cases the damage appeared to be mild and of short duration. Subjective manifestations referable to the heart were trivial or absent. Precordial pain or discomfort and slight dyspnea were the main complaints. The objective manifestations consisted of abnormalities in the heart sounds, the presence of a gallop rhythm, a pericardial friction rub and systolic murmurs in various areas. The findings were transient and occurred in comparatively few cases. The electrocardiographic manifestations consisted of changes in the voltage and appearance of the QRS complex from time to time and some shift in the electrical axis; elevation, rounding with upward concavity and occasional coving of the RT segment, and frequent changes in the T wave from positive to isoelectric and negative and back to positive. In the majority of cases the electrocardiographic changes were nonspecific. In occasional cases they were characteristic of pericardial involvement or of localization of the damage to other specific areas of the heart. Complete recovery took place in nearly all cases in this series. Only 1 case showed permanent damage and in another case the cardiac injury was at least partly responsible for death.

**Cardiovascular Manifestations of Neurocirculatory Asthenia.**—Friedman studied the cardiovascular manifestations of neurocirculatory asthenia in 50 cases. He found the heart in neurocirculatory asthenia to be normal in size, structure and function at rest and during effort if unaccompanied by emotional activity. Changes in the rate, rhythm and force of cardiac contractions were observed when preceded by or associated with excitation of the sympathetic nervous system. This phenomenon was observed during a natural exacerbation of the syndrome or following the administration of suitable drugs. Evidence was obtained which suggested that the excitation of the sympathetic nervous system, preceding or associated in a causal fashion with the cardiovascular manifestations of neurocirculatory asthenia, resulted from hypothalamic discharge.

### American Journal of Diseases of Children, Chicago

**70**:201-262 (Oct.) 1945

*Infectivity of Primary Complex of Tuberculosis of Childhood. W. H. Feldman and H. F. Helmholz.—p. 201.
Streptococci ("Enterococci") of Lancefield Group D: II. Recovery of Lancefield Group D Streptococci from Antemortem and Postmortem Cultures from Infants and Young Children. S. M. Wheeler and G. E. Foley.—p. 207.
Nutrition Studies on Children Living at Home: I. Calory Intakes on Basis of Age from 1 Through 10 Years. Virginia A. Beal, Bertha S. Burke and H. C. Stuart.—p. 214.
Basal Metabolism of Eight Nursery School Children Determined at Three Month Intervals. Mina W. Lamb.—p. 220.
Histoplasmosis in Children: Review of Literature, with Report of Case. A. M. Iams, M. M. Tenen and H. F. Flanagan.—p. 229.

**Infectivity of Primary Tuberculous Complex of Childhood.**—Feldman and Helmholz examined during a six year period lesions of primary pulmonary tuberculosis for the presence of virulent tubercle bacilli in 29 children dying of causes other than tuberculosis. Each specimen was used to inoculate 2 guinea pigs, and the results were observed at necropsy eight weeks later. In only 5 of 29 patients were virulent tubercle bacilli demonstrated. The youngest child in whom virulent tubercle bacilli were found was an infant of 3 months, and the oldest in whom the results were positive was a child of 11 years. If the results of the study of this small series of cases are a true reflection of the state of infectivity of the lesion of the primary complex in children without concomitant tuberculous disease, one may conclude that the tubercle bacilli responsible for the primary lesions of pulmonary tuberculosis of childhood tend in most instances to become avirulent or to disappear.

### Connecticut State Medical Journal, Hartford

**9**:911-1002 (Dec.) 1945

Experiences at Nagasaki, Japan. B. R. Harris and M. A. Stevens.—p. 913.
The 39th General Hospital. J. C. Fox Jr.—p. 918.
Pneumonia and Empyema Due to Beta Hemolytic Streptococcus. R. E. Durkee Jr.—p. 922.
New Arthroplasty for Small Joints. E. H. Crosby and R. E. Galasinski.—p. 926.

### Indiana State Medical Assn. Journal, Indianapolis

**38**:439-482 (Nov.) 1945

Indiana State Medical Association. N. K. Forster.—p. 439.
Infectious Mononucleosis. W. D. Paul.—p. 444.
Upper Respiratory Infections in Children, with Special Reference to Involvement of Lymphoid Tissue. L. F. Swihart.—p. 448.
Prevention of Disability in Traumatic Conditions of Extremities. J. L. Lindquist.—p. 451.
Modern Anesthesia. R. A. Geider.—p. 454.
"Tyer" Used in Gallbladder Surgery. F. E. Hagie.—p. 457.
Eye Examinations as Conducted in the Navy. D. H. Row.—p. 458.

**38**:483-580 (Dec.) 1945

The Medical Profession Today and Tomorrow. W. B. Miller.—p. 483.
General Treatment of Arthritis. L. T. Swaim.—p. 487.
Bronchiectasis. L. W. Nehil.—p. 492.
Pseudomyxoma Peritonei in Man Following Rupture of Retrocecal Mucocele. E. L. Fitzsimmons.—p. 494.
Artificially Induced Remission in Case of Subacute Bacterial Endocarditis. L. M. Sales.—p. 499.

## Journal of Experimental Medicine, New York

**82**:297-374 (Nov.) 1945

Protective Action of Trypan Red Against Infection by Neurotropic Virus. H. G. Wood and I. I. Rusoff.—p. 297.
Maximal Hemoglobin and Plasma Protein Production Under Stimulus of Depletion. Frieda S. Robscheit-Robbins, L. L. Miller and G. H. Whipple.—p. 311.
Studies on Etiology of Primary Atypical Pneumonia: II. Properties of Virus Isolated and Propagated in Chick Embryos. M. D. Eaton, G. Meiklejohn, W. van Herick and Marilla Corey.—p. 317.
Id.: III. Specific Neutralization of Virus by Human Serum. M. D. Eaton, W. van Herick and G. Meiklejohn.—p. 329.
Mechanism of Augmenting Action of Mineral Oil on Antibody Production: Tissue Reactions and Antibody Response to Dysentery Vaccine in Saline and in Saline Lanolin Mineral Oil Emulsion. W. E. Ehrich, S. P. Halbert, E. Mertens and S. Mudd.—p. 343.
Hemoglobin Precipitation in Renal Tubules: Study of Its Causes and Effects. C. L. Yuile, M. A. Gold and E. G. Hinds.—p. 361.

## Journal of Immunology, Baltimore

**51**:191-305 (Oct.) 1945

Spontaneous Loss of Specificity of Absorbed Immune Hemagglutinating Sera. W. C. Boyd, L. G. Boyd and Estelle R. Warshaver.—p. 191.
Standardization of Cardiolipin-Lecithin-Cholesterol Antigen in Complement Fixation Test for Syphilis. Elizabeth Maltaner and F. Maltaner. —p. 195.
Studies on A-Antigenic Polysaccharide from Abomasus of Cattle. E. Jorpes and T. Thaning.—p. 215.
Inhomogeneity of Urinary Human A-Substance. E. Jorpes and T. Thaning.—p. 221.
Distribution of Blood Groups, Subgroups and Rh Blood Types in Japanese. E. B. Miller and T. Taguchi.—p. 227.
Immunologic Studies on Scorpions. E. Grasset, A. Schaafsma and J. A. Hodgson.—p. 231.
Methods for Production of Alpha and Theta Toxins of Clostridium Welchi. M. H. Adams and E. D. Hendee.—p. 249.
Antigens of Shigella Sonnei. K. M. Wheeler and F. L. Mickle.—p. 257.
p-Aminobenzoic Acid Synthesis by Neisseria Gonorrheae in Relation to Clinical and Cultural Sulfonamide Resistance. M. Landy and Ruth B. Gerstung.—p. 269.
Specific Antigen Recovered from Tissues Infected with M. Paratuberculosis (Johne's Bacillus). B. Sigurdsson.—p. 279.
Effect of Environmental Temperature on Experimental Influenza in Mice. S. E. Sulkin.—p. 291.
Type Specificity of Immune Protection Against Shigella Paradysenteriae (Flexner). A. J. Weil and K. Farsetta.—p. 301.

## Journal Industrial Hygiene & Toxicology, Baltimore

**27**:211-238 (Oct.) 1945

Irritating Vapors Produced by Burning Cellulosic Materials. W. H. Easton.—p. 211.
Evaluation of Urinary Lead Determinations: I. Significance of Specific Gravity. L. Levine and J. P. Fahy.—p. 217.
Sampling and Determination of Methanol in Air. G. W. Rogers. —p. 224.
Preparation of Microscopic Spheres from Quartz. A. Salazar and L. Silverman.—p. 231.
Control of Occupational Tuberculosis in Hospitals. L. Brahdy.—p. 234.

## Journal of Investigative Dermatology, Baltimore

**6**:279-322 (Oct.) 1945

*Early Syphilis Resistant to Treatment with Penicillin: Report of Case. W. G. Tyson.—p. 279.
Experimental Studies on Chromoblastomycosis. R. D. Azulay.—p. 281.
Surface Active Agents: Chemical Types and Applications. H. C. Speel. —p. 293.
Hair Root Strength and Menstrual Cycle. W. L. Whitaker.—p. 305.
Evaluation of "Intraderm Sulfur" for Acne Vulgaris. G. M. MacKee, J. Wachtel, F. L. Karp and F. Herrmann.—p. 309.

**Early Syphilis Resistant to Penicillin.**—Tyson reports a case in which a penile ulcer appeared ten days after intercourse. At the time of examination, two weeks after appearance of the lesion, dark field examination revealed Treponema pallidum. The Kahn test was positive. Treatment consisted of thirty intramuscular injections of 80,000 units of penicillin, or a total of 2,400,000 units over a period of five days. The serologic test remained positive for several weeks and the penile lesion did not heal. An ulcer was still present when the serologic test became negative. When the serologic tests became positive again and secondary lesions appeared, treatment was repeated with 600,000 units of penicillin and eight hours of fever therapy. After this the penile lesion and secondary lesions healed. Spinal fluid examinations for syphilis were negative. It is significant that the patient, aged 24, responded to penicillin plus fever but apparently did not respond to penicillin alone.

## Journal of Neurophysiology, Springfield, Ill.

**8**:341-474 (Nov.) 1945. **Partial Index**

Influence of Hypothalamic Stimulation on Cortically Induced Movements and on Action Potentials of Cortex. J. P. Murphy and E. Gellhorn. —p. 341.
Transsynaptic and Direct Stimulation of Postfibers in Artificial Synapse Formed by Severed Mammalian Nerve. C. R. Skoglund.—p. 365.
Localization of Premotor Interneurons Discharging Through Peroneal Nerve. C. G. Bernhard and B. Rexed.—p. 387.
Relations Between Multiple Innervation and "Segmental" Response of Skeletal Muscle of Dog. J. E. Markee and H. Löwenbach.—p. 409.
Anatomic and Physiologic Properties of Cutaneovisceral Vasomotor Reflex Arcs. A. Kuntz.—p. 421.
Relation of Electroencephalogram to Photometrically Observed Vasomotor Changes in Brain. C. W. Darrow and C. G. Graf.—p. 449.
Acoustic Projection System: Comparative Study. H. W. Ades and R. E. Felder.—p. 463.

## Journal of Pharmacology & Exper. Therap., Baltimore

**84**:301-412 (Aug.) 1945

Studies on Analgesics: I. Time-Action Curves of Morphine, Codeine, Dilaudid and Demerol by Various Methods of Administration; II. Analgesic Activity of Acetylsalicylic Acid and Aminopyrine. N. Ercoli and M. N. Lewis.—p. 301.
Permeability of Mycobacteria to Sulfonamides and Sulfonamide-like Agents. D. Yegian and Vera Budd.—p. 318.
Studies on Shock Induced by Hemorrhage: XII. Some Properties of Naturally Occurring Inhibitor of d-Amino Acid Oxidase. Margaret E. Greig and W. E. De Turk.—p. 325.
Antithyroid Studies: I. Goitrogenic Activity of Some Thioureas, Pyrimidines and Miscellaneous Compounds. D. A. McGinty and W. G. Bywater.—p. 342.
Toxicity Studies on Benzyl Benzoate and Related Benzyl Compounds. B. E. Graham and M. H. Kuizenga.—p. 358.
Destruction by Tyrosinase of Irritant Principles of Poison Ivy and Related Toxicants. I. W. Sizer and Clemens E. Prokesch.—p. 363.
Isolation of Di (p-Chlorophenyl) Acetic Acid (DDA) from Urine of Rabbits Poisoned with 2,2 Bis (p-Chlorophenyl) 1,1,1 Trichlorethane (DDT). E. F. Stohlmand and M. I. Smith.—p. 375.
Comparative Study of Effectiveness of 1,3,7 Trimethylxanthine and Certain Dimethylxanthines (1,3 Dimethylxanthine and 3,7 Dimethylxanthine) Against Fatigue. F. Huidobro.—p. 380.
Pharmacologic Studies of Some Benzofuranone Derivatives. R. K. Richards, G. M. Everett and K. E. Kueter.—p. 387.

## Michigan State Medical Society Journal, Lansing

**44**:1195-1242 (Nov.) 1945

Penicillin in Treatment of Syphilis. S. W. Becker.—p. 1195.
Recent Advances in Treatment of Syphilis. A. C. Curtis and G. Morrow.—p. 1198.
Treatment of Sulfonamide Resistant Gonorrhea with Penicillin as Clinic Routine. J. C. Dodds.—p. 1204.
Herniated Nucleus Pulposus. F. H. Mayfield.—p. 1206.
Significance of Rectal Hemorrhage. T. Wilensky.—p. 1209.

## Nebraska State Medical Journal, Lincoln

**30**:417-456 (Dec.) 1945

Recent Trends in Neuropsychiatric Thinking and Practice. N. D. C. Lewis.—p. 420.
Mental Hygiene Needs in Nebraska. A. E. Bennett.—p. 425.
Thiouracil in Treatment of Hyperthyroidism. A. Sachs and R. L. Egan. —p. 431.
Malignant Lymphoma with Meningeal and Polyradicular Infiltration. G. A. Young, R. H. Young and W. M. Gysin.—p. 434.

## New England Journal of Medicine, Boston

**233**:639-672 (Nov. 29) 1945

Nutritional Status of Civilians Rescued from Japanese Prison Camps. A. M. Butler, J. M. Ruffin, M. M. Sniffen and Mary E. Wickson. —p. 639.
*Therapeutic Measures in Rheumatic Fever: Comparative Study of 150 Cases. R. Gubner and M. Szucs.—p. 652.
Coronary Artery Disease Among Physicians. S. A. Levine and J. A. Hindle.—p. 657.
Surgical Emergencies of Alimentary Tract of Newborn. O. Swenson and W. E. Ladd.—p. 660.
Thrombosis of Mesenteric Veins. Chronic Myelogenous Leukemia. —p. 664.
Leiomyoma of Terminal Ileum.—p. 666.

**Therapeutic Measures in Rheumatic Fever.**—Gubner and Szucs analyzed the effects of various therapeutic measures in 150 cases of acute rheumatic fever. The treatments included sodium salicylate and sodium bicarbonate (33 cases), sodium salicylate and ascorbic acid (32 cases), calcium double salt of benzoic acid and succinic acid benzyl ester (55 cases), sulfathiazole (15 cases); penicillin (5 cases) and sodium bicarbonate alone (10 cases). Sulfathiazole, penicillin and sodium bicarbonate alone were without therapeutic effect. Striking difference

was not evident in the two groups of patients receiving salicylate other than noteworthy diminution in toxicity in the patients receiving ascorbic acid in place of sodium bicarbonate. Comparison was made between the 65 patients given salicylate and the 55 receiving the succinate compound. The patients receiving the succinate compound and ascorbic acid responded more favorably than did those receiving salicylate. The duration of fever, leukocytosis and accelerated sedimentation rate, and total days of hospitalization were uniformly and significantly abbreviated. Signs of carditis developed in 69 per cent of the salicylate treated patients compared with 19 per cent of the succinate treated ones. Relapses of rheumatic activity occurred in 7 of the salicylate treated patients whereas relapses did not develop in those given succinate. Drug toxicity was noted in 19 per cent of the salicylate treated patients but in only 2 per cent of those receiving the succinate compound. Attention is called to the role of succinic acid as a catalyst in biologic oxidation. Evidence is cited that a widespread interference with various constituents involved in tissue oxidation occurs in rheumatic fever—that is, porphyrinuria, lowering of plasma ascorbic acid and vitamin A levels and changes in glutathione. It is suggested that there is an oxidative inactivation of various enzymes in this disease and that administration of succinates may not only prevent inhibition of succinic dehydrogenase (cytochrome C reductase) but as an active reducing agent may also prevent inactivation of other respiratory enzymes. Calcium and ascorbic acid enhance the activity of succinic dehydrogenase, and the administration of ascorbic acid as well as the calcium salt of the succinic acid compound studied therefore appears to be indicated.

## New Jersey Medical Society Journal, Trenton

**42**:347-386 (Nov.) 1945

Acute Cor Pulmonale. H. Halprin and M. W. Shulman.—p. 353.
Modern Concepts in Clinical Hematology as Revealed by Peripheral, Bone Marrow and Splenic Aspirations. M. Morrison.—p. 358.

**42**:387-434 (Dec.) 1945

Streptococcus-Staphylococcus Combined Antigens in Treatment of Rheumatoid Arthritis (Streptococcus Toxin-Bacterial Suspension) with (Staphylococcus Toxoid-Bacterial Suspension). P. J. Warter, D. A. Donio and S. Horoschak.—p. 391.
Reducing Period of Postoperative Bed Rest. R. T. deHellebranth. —p. 399.
Treatment of Anginal Syndrome with Thiouracil. S. Ben-Asher.—p. 401.
Medical Care for Veterans. P. R. Hawley.—p. 406.

## Ohio State Medical Journal, Columbus

**41**:1073-1184 (Dec.) 1945

Psittacosis as Cause of Atypical Pneumonia Penicillin Therapy. R. F. Parker.—p. 1097.
Dihydroergotamine (D. H. E. 45) in Treatment of Migraine: Preliminary Clinical Observations. M. D. Friedman and D. A. Friedman. —p. 1099.
*Allergenic Effect of Silica and Relation to Dyspnea in Silicosis. W. J. Habeeb.—p. 1101.
Preliminary Report: Low Calcium Treatment of Poliomyelitis. B. C. Wiley.—p. 1103.
Modification of Syncope Syndrome to Circulatory Shock. R. D. Barnard. —p. 1107.
Surgical Treatment of Gastric and Duodenal Ulcer. M. M. Zinninger. —p. 1115.
Perforation of Sigmoid Colon by Ingested Toothpick. F. G. Hamilton and J. F. Corrigan.—p. 1119.

**Allergenic Effect of Silica.**—Habeeb says that a new factor in silicotic dyspnea has recently come to light, namely bronchospasm. Administration of epinephrine relieves dyspnea and bronchospasm, whereas histamine causes dyspnea and wheezing due to bronchospasm in patients with silicosis. Eosinophilia is generally considered to be part of an allergic response, and, since a high percentage of patients with silicosis have a blood eosinophilia which is proportional to the extent of their disease, it seems safe to conclude that silica dust has allergenic properties. The author discusses such factors as fibrosis, emphysema, bronchospasm, capillary obstruction and dilatation and believes that all play a variable part in the respiratory disability.

## Rhode Island Medical Journal, Providence

**28**:777-860 (Nov.) 1945

Pathology of Coronary Artery Sclerosis and Thrombosis. B. E. Clarke. —p. 791.
Recent Advances in Treatment of Acute Myocardial Infarction. A. J. Geiger.—p. 793.
Neuropsychiatric Aspects of Coronary Artery Disease. C. Binger. —p. 797.
Clinical Aspects of Acute Coronary Thrombosis. A. M. Burgess.—p. 799.
Medical Care for Veterans. J. E. Farrell.—p. 817.

## Rocky Mountain Medical Journal, Denver

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Nasal Hemorrhage in Daily Practice. R. Waldapfel.—p. 835.
Recovery from Cavernous Sinus Thrombosis and Staphylococcic Pneumonia by Combined Use of Penicillin, Sulfadiazine and Antistaphylococcus Serum: Case Report. T. P. Sears and F. L. Wilson.—p. 838.
Closure of Defect of Skull with Tantalum. P. R. Farrington.—p. 842.
Lung Resection for Chronic Pulmonary Infection. R. Davison.—p. 844.
Effects of Oxygen on Auriculoventricular Nodal Rhythm Following Acute Coronary Occlusion. H. A. Bradford.—p. 846.
Office Procedure—Penicillin Treatment for Gonorrhea in Four Hours—Male or Female. W. L. Chadwick.—p. 851.
Belle Bonfils Memorial Blood Bank. M. R. Rymer and E. R. Mugrage. —p. 852.

**42**:921-1002 (Dec.) 1945

Sodium Pentothal Anesthesia. H. B. Stein.—p. 938.
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Technical "Pitfalls" in Thyroid Surgery. G. B. Kent and K. C. Sawyer. —p. 944.
Clinical Comparison of Methergine and Natural Ergonovine. L. C. Hepp and J. R. Evans.—p. 949.
*Failure of Vitamin K as Antidote in Dicumarol Poisoning. T. C. Bauerlein.—p. 950.
Prospect for Future Control of Tuberculosis. J. A. Cremer.—p. 952.

**Failure of Vitamin K in Dicumarol Poisoning.**—The case presented by Bauerlein indicates that vitamin K in large doses is in some cases without effect on the prothrombin level when it has been seriously affected by the use of dicumarol. A man aged 52, who had been treated for thrombophlebitis of the ankle by ligation of the saphenous vein, was given 100 mg. of dicumarol daily during subsequent painful swelling of the leg. Prothrombin estimations were not done. After thirteen doses of dicumarol the patient reported hematuria. The thrombophlebitis had subsided completely except that the thrombosed vein was still palpable. The patient was given a vitamin K preparation by vein and by mouth for several days, but hematuria persisted and the prothrombin time was prolonged until blood and fresh plasma transfusions were given. Fresh plasma undoubtedly is a good source of prothrombin. Bauerlein concludes that the administration of dicumarol without daily determination of the prothrombin time is an unwise procedure and may result in serious hemorrhage even in the absence of trauma. The tourniquet test becomes positive when the prothrombin time is definitely prolonged by the use of dicumarol. Large doses of vitamin K seemed to be without effect, at least within a six day period, in abolishing the prothrombin deficiency induced by dicumarol in the case observed here. Fresh plasma should be used to combat the hemorrhagic tendency due to dicumarol.

## Tennessee State Medical Assn. Journal, Nashville

**38**:395-436 (Dec.) 1945

Essential Hypertension and Its Surgical Treatment. E. R. Donathan. —p. 395.
Importance of Minimal Tuberculosis. R. B. Turnbull.—p. 399.
Getting Maximum Benefit from Bed Rest in Treatment of Pulmonary Tuberculosis. Juanita D. Newman.—p. 402.
Serodiagnosis in Syphilis. R. H. Kampmeier.—p. 404.
Surgical Treatment of Hyperthyroidism. G. T. Howard Jr.—p. 410.

## Texas State Journal of Medicine, Fort Worth

**41**:389-442 (Dec.) 1945

Should Our Doctors be Regimented? R. L. Thomas.—p. 396.
Organic Lesions Resulting from Emotional Stress. W. Dock.—p. 398.
Penicillin in Treatment of Congenital Syphilis. E. E. Wilkinson, W. H. Saunders and A. E. Hansen.—p. 401.
Tularemia: Report of 6 Cases of Tick Borne Origin. W. W. Lindahl, M. C. Ritota and T. B. Metzger.—p. 404.
Injury to Colon from Air Hose Inflation. R. J. White.—p. 406.
Postpartum Sterilization. A. T. Stewart.—p. 408.
Survey of Tuberculosis Observed at Freeman Clinic from 1934 to 1944 and Related Statistics. G. L. Hacker.—p. 410.
Diagnosis and Treatment of Ocular Neuroses. P. J. Leinfelder.—p. 414.

## FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

### British Journal of Urology, London

**17**:85-130 (Sept.) 1945

Glandular Nodule in Benign Glandular Enlargement of Prostate: Its Development and Cause. C. MacLeod.—p. 85.
Tubercle Bacilluria. C. J. Marshall.—p. 102.

### Journal of Mental Science, London

**91**:411-584 (Oct.) 1945. **Partial Index**

*Neuropathologic Problems Arising from Prefrontal Leukotomy. A. Meyer and E. Beck.—p. 411.
Psychopathic Personality and Crime. W. N. East.—p. 426.
Delirious Disorientation: Law of Unfamiliar Mistaken for Familiar. M. Levin.—p. 447.
Neuroses in Firemen. E. Guttmann and A. A. Baker.—p. 454.
Explosive Rage Following Head Injury. R. S. Hooper, J. M. McGregor and P. W. Nathan.—p. 458.
Impulsive Psychopath: Clinical and Electrophysiologic Study. R. S. Hodge.—p. 472.
Kielder Experiment. R. R. Prewer.—p. 481.
Phantasies in Evacuated Children. F. Bodman, E. Stephen and L. K. Sambrook.—p. 499.
Depression in Parkinsonism Treated by Prefrontal Leukotomy. E. Schwarz.—p. 503.
Two Years' Experience of Female Schizophrenics Treated by Insulin Coma Therapy. Joyce McConnell.—p. 506.
Syndrome Associated with Left Hand Paralysis of Central Origin. R. Klein and P. P. Mallie.—p. 518.

**Neuropathologic Problems After Prefrontal Leukotomy.**—The material reviewed by Meyer and Beck consists of 7 cases of prefrontal leukotomy and an eighth case in which frontal lobectomy had been carried out on a mentally normal person with a basal meningioma. This last case has proved of great value as a test case for complete severance of fiber connections. In 2 further cases only macroscopic investigation was performed. All the patients who recovered showed little or moderate deterioration. Clinical complications did not interfere with recovery, and the operation itself produced circumscribed lesions uncomplicated by severe hemorrhage and softening. Among the 3 patients of the unrecovered group 1 (patient 5) was severely deteriorated. The 2 others (3 and 4) were little deteriorated and should have had a fair chance of recovery. However, in case 3 uremia, nicotinic acid deficiency and a senile condition of the brain must be considered as adverse factors. In case 4 the cut was placed too posteriorly, involving the agranular frontal cortex and the caudate nucleus. In addition, extensive hemorrhage had destroyed a considerable part of the white matter of the prefrontal lobe. In case 5 the cut was placed in too anterior a plane. As regards the recovered group, it is surprising how little damage was sufficient to produce a remarkable clinical improvement. The cut in these cases was incomplete with regard to severance of the thalamofrontal fibers. From this it follows that in suitable cases (in which deterioration has not occurred) a good recovery may follow surprisingly incomplete and circumscribed cuts in the white matter of the prefrontal lobe. Recovery may be prevented by an excessive lesion, either by cutting in too posterior a plane or by causing extensive hemorrhage. The avoidance of hemorrhage seems to be a major necessity. There is some evidence that the projection of thalamic fibers to the orbital region is of considerable strength, and that the cortex in front of the surgical lesion is not wholly unaffected. The center median nucleus of the thalamus displays in the human brain a considerable variation of cell density. Its significance requires further investigation. The only conclusion that can be drawn at present is that, under both normal and psychotic conditions, the center median nucleus is liable to considerable variations in cell density and spacing of cells, which apparently far exceed those seen in animal brains. This variability is of remarkable interest if one regards the nucleus as an association center within the thalamus, which itself appears to be one of the corner stones of what one might call the anatomic substrate of personality organization. It is the more remarkable, as previous work on individual architectural differences within the cerebral cortex has demonstrated the relative constancy of the cortical pattern.

### South African Medical Journal, Cape Town

**19**:445-464 (Dec. 8) 1945. **Partial Index**

Forward Surgery of Abdominal War Wounds. J. F. P. Erasmus.—p. 446.
Doctors' Hobbies: Succulent Collecting. C. T. Villett.—p. 455.
*Sickle Cell Trait in the South African Bantu. A. Altmann.—p. 457.

**Sickle Cell Trait in the South African Bantu.**—Sickle cell anemia and the sickle cell trait seem to be rare in South Africa. Altmann desired to confirm this fact on a larger number of specimens of Bantu blood. Of 403 blood specimens of South African Bantus only 1 showed the sickle cell trait in a moist sealed preparation after twenty-four hours' incubation at 37 C. He concludes from this that the sickle trait, which is common in West African and American Negroes, is rare in the South African Bantu.

### Nordisk Medicin, Gothenburg

**25**:339-378 (Feb. 23) 1945. **Partial Index**

Pathogenesis of Peptic Ulcer. E. Ask-Upmark.—p. 339.
Gastrointestinal Hemorrhages in Childhood. A. Njå.—p. 345.

#### Hospitalstidende

Embolism of Abdominal Aorta. E. Hagens and P. Fogh-Andersen.—p. 347.

#### Norsk Magasin for Lægevidenskapen

Miliary Bronchopneumonia, Subcutaneous and Mediastinal Emphysema. J. H. Vogt.—p. 357.
*Empyema and Chemotherapy. K. Aas.—p. 360.

#### Hygiea

Studies on Scabies. B. Heilesen.—p. 365.

**Empyema and Chemotherapy.**—Aas compared the 387 cases of pneumonia at Aker Sykehus treated with chemotherapy and 352 earlier cases. He found a reduction in the percentage of empyema as a result of chemotherapy and little change in the percentage of cases with exudates.

**10**:1831-1896 (June 14) 1941. **Partial Index**

Adiposity. R. Hatlehol.—p. 1832.

#### Hospitalstidende

*Patent Foramen Ovale and Embolia Paradoxa with Embolus in Foramen Ovale. B. Vimtrup.—p. 1839.

#### Norsk Magasin for Lægevidenskapen

Electrocardiographic Results in Older Persons. H. Laake.—p. 1858.

#### Hygiea

Critical Study of "Cerebral General Symptoms." Nils Antoni.—p. 1865.
*Malignant Granulocytopenia in Chronic Rheumatic Disorders. G. Edström.—p. 1873.
Treatment of Certain Fractures with Local Procaine Injections. J. Adams-Ray.—p. 1877.

**Patent Foramen Ovale.**—Vimtrup concludes that anatomically patent but functionally closed foramen ovale occurs in about 20 per cent of all adult persons and under ordinary conditions is without symptoms. If, however, the pressure in the right atrium becomes higher than that in the left, grave complications may set in; under certain circumstances even large emboli can penetrate from the right half of the heart to the left. Paradoxical emboli are not an unusual finding at necropsy; 2 cases are reported. Twenty-one cases of embolus in foramen ovale are cited.

**Malignant Granulocytopenia in Chronic Rheumatic Conditions.**—Edström reports that, in 1,605 cases of rheumatic fever and chronic polyarthritis from 1936 to 1940 in which gold therapy and administration of aminopyrine and salicylates were applied, 15 deaths occurred, 12 from rheumatic infection and 3 from malignant granulocytopenia, while in 819 cases from 1928 to 1933 treated mainly with salicylates and to some extent with aminopyrine there were 33 deaths, 30 due to rheumatic infection and 3 to malignant granulocytopenia. The danger of malignant granulocytopenia apparently has not been increased by the introduction of the new therapy. The complications in this antirheumatic therapy, particularly malignant granulocytopenia, are believed to be more the results of an infectious-toxic factor in an organism with strong hyperergic reaction than the results of drug reaction.

# Book Notices

**The Autonomic Nervous System.** By Albert Kuntz, Ph.D., M.D., Professor of Micro-Anatomy in St. Louis University School of Medicine, St. Louis. Third edition. Cloth. Price, $8.50. Pp. 687, with 91 illustrations. Philadelphia: Lea & Febiger, 1945.

Eleven years have intervened since the appearance of the second edition of Kuntz's book, years containing extensive investigative work into the form and function of the autonomic nervous system and into the role of this system in diseases and the surgical approach to therapy. These advances are reviewed and interpreted in this edition, and the content of the book has materially increased without a proportionate increase in pages. This has been accomplished by increasing the wordage per page. While the chapters on the anatomy of the autonomic nervous system have retained their arrangements, much new information has been added, for example the classification of the cells of the ganglions and the cytologic data on the processes of the ganglion cells. The role of the cerebral cortex in autonomic functions, which has been considerably elucidated since the appearance of the second edition, is concisely and completely covered. There is extensive augmentation of the chapters on autonomic physiology, which is particularly true in regard to the functions of diencephalic centers. The discussion of the role of chemical mediators is elaborated to take into account the active investigations in this field, and the phenomenon of denervation sensitivity is considered in detail. Discussion of the embryologic development of the autonomic nervous system is not materially altered from that of the second edition. While the chapters dealing with the innervation of the various viscera and structures have in large part retained their original outlines, new data have been judiciously added, for example the role of the vagus in cardiospasm, the stimulability of the jejunum and the important work on the stimulation of the respiratory center by carbon dioxide. The discussion of the histopathology of the autonomic ganglion cells has been somewhat enlarged, and neuronal changes such as hydropic alterations and neurofibrillar changes are given more importance.

In considering clinical relationships Kuntz finds no brief for the theory of vagotonia and sympathicotonia. Tests for autonomic function are extensively described under the headings (1) studies of singly innervated structures as the nictitating membrane, (2) tests based on denervation of either sympathetic or parasympathetic supply, (3) assay of the output of humoral mediation and (4) the observation of pharmacologic actions. The chapter on the autonomic nervous system in disease has been enlarged to include new data such as the more recent observations on carotid sinus sensitivity, emotional factors in the etiology of peptic ulcer and the etiology of intussusception. In reviewing autonomic neurosurgery Kuntz is now able to point out that no anatomic or physiologic rationale exists for periarterial sympathectomy. The results of sympathetic ganglionectomy and ramisection are reviewed, and the effects of autonomic surgery are reviewed in the various diseases in which such surgery is performed.

No review of this book is adequate without mentioning the extensive bibliography. This edition is welcome, for it brings down to date a scholarly, well documented treatise on an important part of the nervous system. It forms a valuable addition to the library of all concerned with neurology and it can be recommended without reservation.

**Aviation Neuro-Psychiatry.** By R. N. Ironside, M.B., F.R.C.P., Neurologist, West London Hospital, London, and I. R. C. Batchelor, M.B. Cloth. Price, $3. Pp. 167. Baltimore: William Wood & Company, 1945.

This book is a record of the authors' experiences overseas with Royal Air Forces combat units. It contains details concerning neurologic and psychiatric disabilities. The contents are a dull, nondynamic recapitulation of case histories of disabled fliers of the type found in any textbook. The drama, pathos and heroics of active combat are absent, as are the dynamic factors in the production of the war neuroses. Treatment consists for the most part in permanently grounding. American flight surgeons who were not specialists were far ahead of these neuropsychiatrists in their knowledge and therapeutic ability.

**Industrial Oil and Fat Products.** By Alton E. Bailey, Senior Chemical Technologist, Southern Regional Research Laboratory, U. S. Department of Agriculture, New Orleans, Louisiana. Cloth. Price, $10. Pp. 735, with 111 illustrations. New York: Interscience Publishers, Inc., 1945.

This book has been prepared by an author well versed in the technical aspects of fat and oil processing and their commercial applications. The benefit of advice from numerous experts in the various fields has been utilized, as is so desirable in literature presenting the complex problems of modern industry. The work may be considered as a textbook directed to industrial technologists. It covers briefly the chemical characteristics and nutritional properties of fats in its opening section as a background for the reader. Subsequently the material is developed in discussions on the sources of all known types of fat compounds, including production and consumption figures. The uses to which the various oils are placed in food production and other manufactured products, with the factors determining the selection of each for specific purposes, comprises a section of the book which is particularly well done. The final portion deals with physical and chemical processes to which fats and oils are commonly subjected in their preparation for various uses, from the original extraction by pressure or by solvent to treatment by chemicals for purification, fractionation or other special effect. The material is clearly presented in a well organized manner. It is documented freely by references to the original work from which the facts were obtained. The numerous tables and diagrams add much to the information supplied. The predominance of references are of very recent years. The book would appear to be an indispensable volume in any library of technical information on fats.

**Sechenov. Akademiya Nauk Soyuza SSR, nauchno-populyarnaya seriya, biografii.** [By] Kh. S. Koshtoyants. [Sechenov. Academy of sciences of U.S.S.R., Scientific Popular Series, Biography.] Cloth. Pp. 199, with portrait. Moscow & Leningrad: Izdatelstvo Akademii Nauk SSSR, 1945.

This interesting biography in Russian deals with the man who is referred to by the Russians as the father of Russian physiology. While the name of Pavlov is well known in this country, not only among scientific circles but even among laymen, that of Sechenov is probably known only to workers in his particular field. Born in 1829, Sechenov belongs to that small but elite group of scientists who are the true glory of Russia's science. This group includes such names as Mendeleev, A. P. Borodin, A. N. Beketov, A. O. Kovalevskiy, V. O. Kovalevskiy and Mechnikov. As did most ambitious Russian students of that age, on his graduation from the University of Moscow, Sechenov spent several years abroad. Here he had the privilege to work under such men as Du Bois Reymond, Carl Ludwig and Helmholz and to listen to the lectures of Johannes Mueller. While working in the laboratory of Claude Bernard, Sechenov made the important observation that there existed in the brain of a frog special mechanisms capable of inhibiting reflexes proceeding from the spinal cord. This was a discovery of a special physiologic function of the brain. His researches were published in 1863 under the title "Reflexes of the Brain." Somewhat later he published "Physiology of the Nervous System," in which he developed the hypothesis that all conscious and subconscious acts are in their essence reflexes. This was a startling idea for the time, namely that all psychic life with all its manifold manifestations is activated and maintained by stimuli which the organism receives from outside as well as with stimuli originating within the organism. Sechenov argued that loss of sensory stimuli or loss of sensations would render psychic life impossible. The principal cause of every act of a human being is to be found outside of him, in his environment. He arrived at a further conclusion that sensory stimuli need not necessarily be manifested by a motor act or any other external manifestation because the organism possesses nervous centers capable of inhibiting reflexes. This conclusion finds basis in his discovery that in the brain of a frog there exist special nervous centers which, when stimulated, will inhibit the development of reflex activities. This capacity for the elaboration of special reflex controls by retardation or inhibition of external manifestation of the reflex mechanism Sechenov considers the most important acquisition by man, constituting in fact the basis of that complicated process which is referred to as thought, intention, desire. Thought, according to Sechenov, is a reflex in its conception and its continuation but

without the terminal act which is expressed in motion. The researches of Sechenov laid the foundation for the work of the Pavlov school. Pavlov himself stated that Sechenov's "Reflexes of the Brain" constituted the starting point of the researches of his own school. The essential similarity and kinship in the work of Sechenov and of Pavlov is that for both the formulation of the most complex acts of the so-called psychic activity depends on the environment. The study of conditional reflexes has demonstrated that the manifold manifestations of the higher nervous activity are the result of constant correlation between the organism and its environment. Both men stressed the objective physiologic method in the investigation of complicated psychic phenomena.

**Analyze Yourself: Enabling Anyone to Become Deeply Psycho-Analyzed Without a Personal Analyst.** By E. Pickworth Farrow, M.A., D.Sc. With a foreword by the late Professor Sigmund Freud, M.D., LL.D. Second edition. Cloth. Price, $2. Pp. 157. New York: International Universities Press, Inc., 1945.

Because of neurotic difficulties the author, a nonmedical professional man, underwent two trials of psychoanalysis with poor results. Each analyst seemed to offend the author, although he felt some improvement from the analytic experiences. He then continued his analytic procedure by having daily hourly appointments with himself, using written free associations. By so doing he dissolved certain repressions and uncovered crucial infantile memories with subsequent therapeutic benefits. The author therefore recommends the process of self analysis and describes its technics in detail. Certain personal discoveries made on himself are used to illustrate the process. Included is a dissertation on the disastrous effects of slaps and blows on infantile omnipotence when administered sufficiently hard to cause pain to the small child.

As Freud states in his foreword, the author uses a technic which was expounded in "The Interpretation of Dreams," although the results are in no way similar. This little book is fascinating and most convincing as to the capacity within some individuals for a type of self analysis. It also reveals a great deal about the author and indicates why he could profit by this procedure as contrasted with the majority of people.

**The Adjustment of the Nervous Veteran in Industry.** By Meyer Brown, M.D., Ph.D. Paper. Pp. 52, with 4 illustrations. Chicago: Zurich Insurance Companies, Industrial Welfare Department, [n. d.].

Among the many articles and books written for the psychiatric edification of the lay person this brochure is one of the best. Written by a competent psychiatrist who has had long practical experience in the Navy, the problems of the interpersonal adjustments of management and veteran labor are discussed in simple, easily understood language. Direct and specific sound advice is given. This is a book that should be widely recommended to industrialists and business men who wish to help service veterans who have become nervous.

**Manual of Psychological Medicine for Practitioners and Students.** By A. F. Tredgold, M.D., F.R.C.P., F.R.S.E. Second edition. Cloth. Price, $5. Pp. 308. Baltimore: William Wood & Company, 1945.

This work continues to be a dull and dry textbook of psychiatry which could hardly satisfy the needs of the practitioner or stimulate the interest of students. Two thirds of the book is devoted to organic disease of the brain, the psychoses, mental defects and legal problems which are not the areas of psychiatry that most concern the nonspecialist. The section on treatment is insufficient for any one to grasp the essentials. The dynamic states of the human mind cannot be grasped by perusal of this book.

**Best Sports Stories of 1944.** By I. T. Marsh and Edward Ehre. Price, $3. Pp. 335. New York: E. P. Dutton & Co., Inc., 1945.

Often the best action writing is that which comes hot off the typewriter in the very midst of some contest in the field of sport. Superiority in sport means also the development of colorful personalities who reflect themselves in interviews and in autobiographical statements. The very best of this writing is assembled in the collection of best stories made by Irving T. Marsh and Edward Ehre. About as fine a philosophical contribution as has appeared in many years and one especially reflecting humanity is the interview with Sam Langford, which heads the list.

**Elements of Foods and Nutrition.** By Mary T. Dowd and Alberta Dent. Second edition. Fabrikoid. Price, $2.25. Pp. 357, with 37 illustrations. New York: John Wiley & Sons, Inc.; London: Chapman & Hall, Limited, 1945.

This is intended as a primer which will arouse the young or uninitiated reader to the importance of good nutrition for good health. The earlier edition, published in 1937, has been completely revised to incorporate the basic nutritional advances made since then. The space devoted to actual discussion of the facts of nutrition is rather limited, whereas more attention is given to a description of the classes of foods and their contribution to a good diet and the proper preparation and use of these foods. Attention is directed to the needs of the family group as well as the individual. Recommended menu patterns are provided, and a feature not found in other books is a critical appraisal of the strength and weakness of racial dietary habits. A discussion of food fads and fallacies lends an interesting conclusion. The style of the book is highly simplified. In some cases rather loose statements are made, the accuracy of which might be questioned. The inclusion of questions and references after each chapter is a fine stimulus for the reader and of help to the teacher. The volume is well suited for use as a textbook in teaching nutrition through the high school level.

**The Effect of Bombing on Health and Medical Care in Germany.** Morale Division, United States Strategic Bombing Survey. Medical Branch Report. Fabrikoid. Pp. 388, with 196 illustrations. Washington, D. C.: War Department, 1945.

The effect of bombing from the air on the health and well-being of the residents of a modern industrial state like Germany inevitably must be profound. This book corroborates that belief. In it an effort has been made to document scientifically the number of deaths from bombing in Germany, the effect of bombing on communicable diseases, the destructive effect of bombing on medical schools, hospitals and sanitary installations, and the influence of bombing alone on the food supply and nutrition and supply of drugs and other medical equipment. Some of the information which is contained in the book has been the subject of newspaper articles, news from Germany in the foreign letters department of THE JOURNAL, correspondence and special articles. This book, nevertheless, presents an all-over picture of the effect of air raids which confirms the generally held belief that bombing alone profoundly influences the lives and health of all those in any large or concentrated population.

**Oral Health.** By H. Shirley Dwyer, D.D.S., Director, Division of Dental Services, New Hampshire State Department of Health, Concord. Cloth. Price, $1.25. Pp. 132, with 12 illustrations. Philadelphia & London: W. B. Saunders Company, 1945.

This book is planned particularly for health workers. It gives, in brief, information regarding the growth and development of the teeth and the causes of dental decay, the facts regarding prevention and prophylaxis in dentistry and much about the care of the more common diseases of the mouth. Other chapters concern the place of the public health nurse in a dental program and the meaning of health education. A final chapter deals with questions that a nurse is frequently asked and the answers to such questions.

**A Companion to Manuals of Practical Anatomy.** By E. B. Jamieson, M.D., Senior Demonstrator and Lecturer on Anatomy, University of Edinburgh, Edinburgh. Sixth edition. Fabrikoid. Price, $4.50. Pp. 736. New York, Toronto & London: Oxford University Press, 1945.

This book was originally written to provide an accurate account of gross anatomy in a small, compact and readily accessible form. That the book has attained this goal is attested by the appearance of the sixth edition. It has been written largely from the regional approach rather than the systematic. This is an advantage for those desiring to carry out various dissections. The only criticism against the book is that the Birmingham Revision of nomenclature has been adopted throughout the text. As to whether or not this is a disadvantage depends on the point of view of the individual anatomist or physician using the book. Many American anatomists strongly urge the retention of the BNA system of terminology until modifications are officially adopted by the various anatomic associations. They also believe that the use of any other system of terminology in the meantime would be detrimental to the best interests of science.

# Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES. THEY DO NOT, HOWEVER, REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY. ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED. EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS, BUT THESE WILL BE OMITTED ON REQUEST.

## VACCINES FOR DYSENTERY

*To the Editor:*—What is the present status of dysentery vaccine as a prophylactic measure? I understand that it is recommended in institutional or other outbreaks of dysentery but that the period of immunization is relatively short. Would there be any practical basis for routinely giving each new admission to a state hospital a prophylactic course of dysentery vaccine in the absence of an epidemic or of any known cases of the disease? M.D., Pennsylvania.

ANSWER.—Extensive studies of dysentery vaccines have been conducted in the past two years under the sponsorship of the Committee on Medical Research of the Office of Scientific Research and Development. During these investigations the vaccines were used extensively in institutions in which dysentery was endemic or epidemic. The results were disappointing. The total numbers of individuals, cases and carriers, who acquired infection in the vaccinated and control groups were essentially the same. In one institution 265 patients were vaccinated and 264 observed as controls. Among these there were 45 and 48 clinical cases respectively and 127 and 128 identified passive carriers respectively. The vaccines which appeared most promising were used in these tests. It is concluded, therefore, that dysentery (Shigella) vaccines as prepared and given at present have no practical value in the control of these infections.

## SYMPTOMS IN POISONING WITH METHYL ALCOHOL AND ETHYLENE GLYCOL

*To the Editor:*—What are the physical observations in methyl alcohol poisoning? Would the ingestion of either methyl alcohol or Prestone (ethylene glycol) by a man aged 40 produce methemoglobin of 30 volumes per cent, coma of about twelve hours' duration, Kussmaul breathing, blood pressure of 110/40-0 with complete anuria of about the same duration, normal spinal fluid, with bilateral internal strabismus, normal fundi ophthalmoscopically, a terminal white blood cell count of 60,000, all superficial reflexes absent and negative Babinski and recti? Four hours following administration of 2,000 cc. of 5 per cent glucose in an isotonic solution, knee and Achilles reflexes reappeared, and blood pressure rose to 180/90. Examination four hours later revealed that these reflexes were again absent and the blood pressure was 110/40-0. Death followed six hours later. About 1 ounce of urine was obtained at the first examination sixteen hours before death; this showed normal sugar and albumin and many pus cells. Would any treatment other than intravenous fluids, oxygen with 5 per cent carbon dioxide and supportive treatment have been indicated? Clifford W. Atherton, M.D., Stambaugh, Mich.

ANSWER.—The symptoms and physical signs of methyl alcohol poisoning as it occurred among a large number of Navy personnel have recently been described by Jacobson, Russell, Grimm and Fox (*U. S. Nav. M. Bull.* **44**:1099 [May] 1945). The symptoms include mild alcoholic intoxication, headache, supraorbital or retro-orbital pain, blurred vision, loss of color vision, first for green, then for red and yellow and finally for blue, central scotoma, abdominal cramps, nausea and vomiting, drowsiness, loss of memory, confusion and coma. An odor of methyl alcohol may be detected on the breath. The physical signs are a flushed face or cyanosis of the chest, face and fingertips, slight fever with proportionately rapid pulse and dilated pupils that react sluggishly or not at all to light. When coma supervenes, the dilated pupils are usually fixed; the skin is cold, moist and clammy; the respiration is labored and deep (5 per minute) and the pulse rapid and thready. In 1 case, however, the pulse was full, bounding and slow (40 per minute) and continued so for ten minutes after respiration had ceased. In many but not all of the fatal cases death was preceded by a series of convulsive seizures described as being of the decerebrate type. Aside from these and the fixed pupils no neurologic abnormalities were described. Examination of the fundus showed mild hyperemia of the disk and retina, haziness of the disk margins and slight engorgement of the blood vessels, most noticeable in the macular area. The urine was acid ($p_H$ 5.5, 6.0) and usually contained traces of albumin and numerous hyaline and granular casts. Methyl alcohol was readily found in the blood.

Cases of poisoning by Prestone (ethylene glycol) have been few in number and inadequately described (THE JOURNAL, June 14, 1930, p. 1940).

In the case described in the query, the meaning of the statement "methemoglobin of 30 volumes per cent" is not clear. If it is meant that 30 per cent of the blood pigment had been converted to methemoglobin, the observation would suggest an intoxication. Methemoglobin formation is not, however, a feature of intoxication by methyl alcohol, nor has it been found in animal experimentation with the glycols. An overdose of such a drug as acetanilid or sulfonal might conceivably give rise to this clinical picture. It could also occur as the result of poisoning by nitrobenzene, aniline or some related compound, although in the case of nitrobenzene poisoning the urine is usually dark. The other features of the case, with the exception of the leukocytosis, are compatible with fatal intoxication induced by alcohols and a number of other organic solvents. The origin of the leukocytosis is not apparent and may be irrelevant. As to therapy, if a state of acidosis was present it could have been corrected by the intravenous administration of a solution of sodium bicarbonate. Its presence could have been determined by measuring the alkali reserve in the blood or, if facilities for this were lacking, by measuring the $p_H$ of the urine. This procedure has been found effective in such cases.

## AMPHETAMINE AND THYROID FOR OBESITY DURING PREGNANCY

*To the Editor:*—I have been treating a young woman successfully for obesity with tablets containing thyroid and amphetamine. She has now become pregnant. Are there any contraindications to the continuance of this medication because of her pregnancy? Are there any reasons to expect any harm to the fetus? M.D., New York.

ANSWER.—In general it is unwise to give amphetamine (benzedrine sulfate) during pregnancy. It would not be very good treatment even if the woman was not pregnant. It was originally recommended in weight reduction because it was supposed to reduce the appetite for food. It is of doubtful value for this purpose. Moderate doses of thyroid would probably not harm either the mother or the fetus during pregnancy, but the condition of the mother should be checked carefully while she is receiving it. A rigid weight reducing diet should not be continued after a patient becomes pregnant. Both mother and fetus require a well balanced diet that is adequate in all respects. In obese women some restriction of the total caloric intake may be desirable during pregnancy in order to prevent gain in weight, but it is doubtful that weight reduction should be carried out during pregnancy.

## SULFOBROMOPHTHALEIN TEST

*To the Editor:*—I would appreciate knowing what amount of dye was used by Colonel Barker and his associates in their sulfobromophthalein test (The Journal, Nov. 3, 1945, p. 653). Some use 2 mg. per kilogram and others 5 mg. per kilogram. Albert F. Brown, M.D., Glendale 6, Calif.

ANSWER.—Sulfobromophthalein 5 mg. per kilogram of body weight was used in all cases studied in the Mediterranean theater (THE JOURNAL, Aug. 4, 1945, p. 997, and Nov. 3, 1945, p. 653). Bloods were drawn at one-half hour and one hour in approximately one half the cases, while the remainder had samples taken at forty-five minutes and one hour. Control studies in soldiers in 1942-1945 indicated that the technic of using 5 mg. per kilogram with samples drawn at forty-five minutes were generally most satisfactory. If 2 or more per cent of dye is retained at the end of forty-five minutes, a second sample was drawn at the hour. Any retention at the hour or failure to reduce further the forty-five minute level was generally abnormal except in the convalescent period from certain acute infectious diseases.

## INJECTION OF PROCAINE FOR FOOTBALL INJURIES

*To the Editor:*—Is it considered good practice, in the treatment of football injuries in which fracture is not present, to inject a knee or ankle with procaine? If so, what is the technic? Is it advisable to let a player continue playing following such an injection? D. L. Hollis, M.D., Biloxi, Miss.

ANSWER.—It is good practice to inject a sprained ankle with procaine when a fracture has been proved absent by x-ray. This does not hold for knee injuries. This injection treatment could be used in football injuries but immediate resumption of play should not be allowed, nor can a cure be expected in every case. One method is to inject, under sterile precautions, 2 to 5 cc. of a 2 per cent solution of procaine into the tender spot on the ligament. Care should be taken not to inject into a blood vessel. It is well to aspirate first and, if no blood is withdrawn, to inject the procaine without withdrawing the needle. Immediate motion should be started. If the next day no pain recurs, it would be allowable to indulge in football. Even so, the ankle should be well strapped with adhesive tape to prevent recurrence of the sprain.